GREEN TOWNSHIP INITIATIVES IN MALAYSIA
マレーシア グリーンタウンシップイニシアティブ

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MALAYSIA

ISAP2012, YOKOHAMA, JAPAN

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Ministry of Energy, Green Technology & Water , Malaysia

マレーシア国　エネルギー･グリーン技術･水利省

Low Energy Office (LEO)

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

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

Dedicated sector formed for **Green Technology development**

NATIONAL GREEN TECHNOLOGY POLICY

国際グリーン技術の政策

Policy Statement

Green Technology shall be a driver to accelerate the national economy and promote sustainable development

4 PILLARS

- ENERGY
- ENVIRONMENT
- ECONOMY
- SOCIAL

4 KEY SECTORS

- ENERGY
- BUILDINGS
- TRANSPORTATION
- WATER AND WASTE

STRATEGIC THRUST
戦略的推進

1. Strengthen The Institutional Frameworks
2. Provide A Conducive Environment For Green Technology Development
3. Intensify Human Capital Development In Green Technology
4. Intensify Green Technology Research And Innovations
5. Promotion And Public Awareness

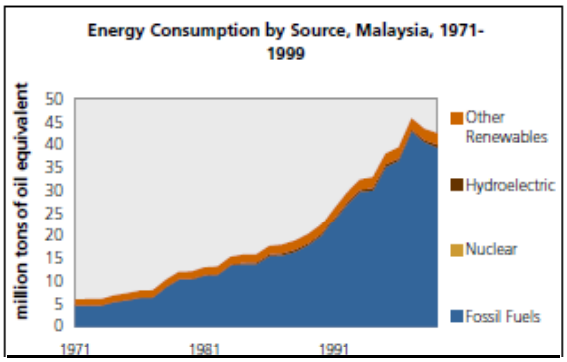
MALAYSIA & URBANISATION - A Case for Change
マレーシア 都市化事例

Population Malaysia

18 million (1990) to 27.6 million (2010) - increase by 53% *(Source: Census Data, 2010)*

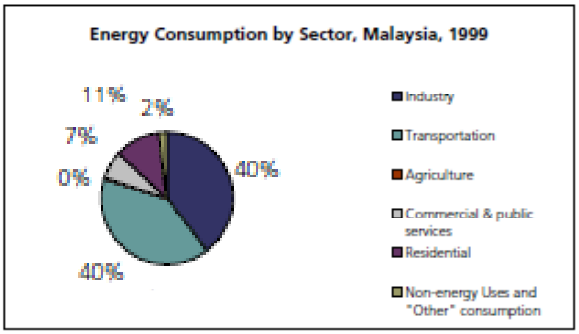
Urbanization Rate

- 27% in 1960, 42% in 1990, 54% in 1994, 61.8% (2000) for Malaysia, 65.4% (2000) for West Malaysia
- Expected to grow to 75% by 2020 *(Source: RFN 2001)*



Energy

- Energy Consumption – 61,279 metric tons (40% transportation & 40% industrial) (2005)
- Energy Produced – 99,917 metric tons (2005)
- 2006 : CO2 emission – 187 million tons 7.2 metric tons/person
- 2004 : 5.9 metric tons/World 4.4 metric tons/person



Introduction of Low Carbon Cities In Malaysia
マレーシア低炭素都市紹介

Governing system in Malaysia :

- **Federal Government**
- **State Governments**
- **Local Governments**

KeTTHA have initiated a programme to promote green township and development in Malaysia

Working with other ministries (Ministry of Housing and Local Government, Ministry of Natural Resources and the Environment), State and Local Governments to promote the concept

LOW CARBON CITIES FRAMEWORK & ASSESSMENT SYSTEM (LCCF) 低炭素都市フレームワークと評価システム

Functions of LCCF

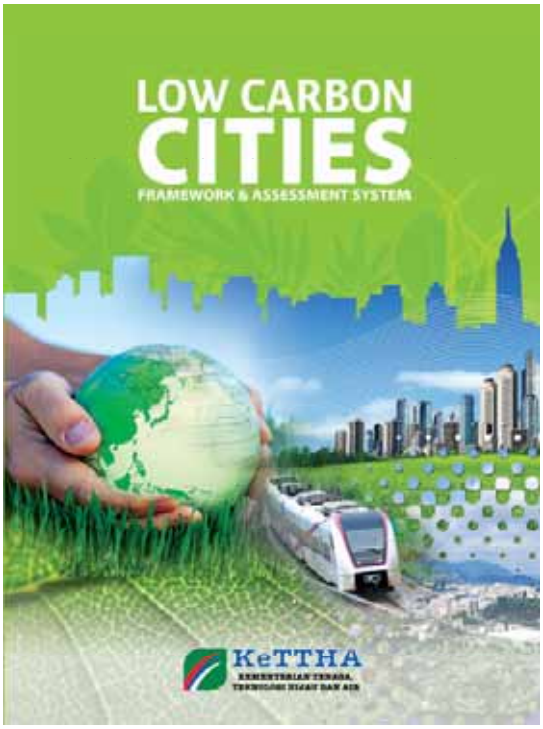
- To encourage & promote the concept of low carbon cities and townships in Malaysia.
- To guide cities in making choice/decisions towards greener solutions
- To assist stakeholders to develop action plans for low carbon development
- As a tool to calculate the carbon emission within the development

Users

- local authorities, township developers, designers and individuals

Target

- To reduce carbon emission intensity by 40% per GDP by the year of 2020



CONTENTS OF LCCF LCCFの内容

PART ONE – LCC Framework

1 Introduction

1. Green house Gases (GHG) – Concept & Brief Overview
2. Background of Low Carbon Cities Framework
3. A Case for Change
4. Malaysia & Trend

2 Sustainable Framework For Low Carbon Cities

1. Definition of Low Carbon City
2. Sustainable Framework for Low Carbon Cities

3 Key Features of LCCF

1. Performance Based System
2. Elements That Contribute to GHG Emissions
3. Approach
4. Application of LCCF
5. Relationship Between Framework and Calculator

4 Performance Criteria For Low Carbon Cities

1. Introduction of Parameters for GHG Reductions
2. Relationship To Carbon Parameters
3. Elements of Lifecycle Assessment

PART TWO – Assessment System

5 The Low Carbon Cities Assessment System (LCCF Calculator) – Concepts And Principles

1. About the LCCFCalculator
2. Who will use it?
3. The Relevance of the Assessment System and Calculator
4. The Concepts and Principles
5. Carbon Neutrality

6 Relevant Carbon Factors

1. Urban Environment
2. Urban Transportation
3. Urban Infrastructure
4. Building

7 User Guide

1. Using the LCCF Calculator
2. Summary Sheet

PERFORMANCE CRITERIA IN LCCF LCCFのﾊﾟﾌｫｰﾏﾝｽ基準

4 Elements for GHG Reductions in Cities and Townships

Urban Environment

- Site Selection
- Urban Form
- Urban Greenery & Air Quality

Urban Transportation

- Shift of Transport Mode
- Green Transport Infrastructure
- Green Vehicles
- Traffic Management

Urban Infrastructure

- Infrastructure Provision
- Waste
- Energy
- Water

Buildings

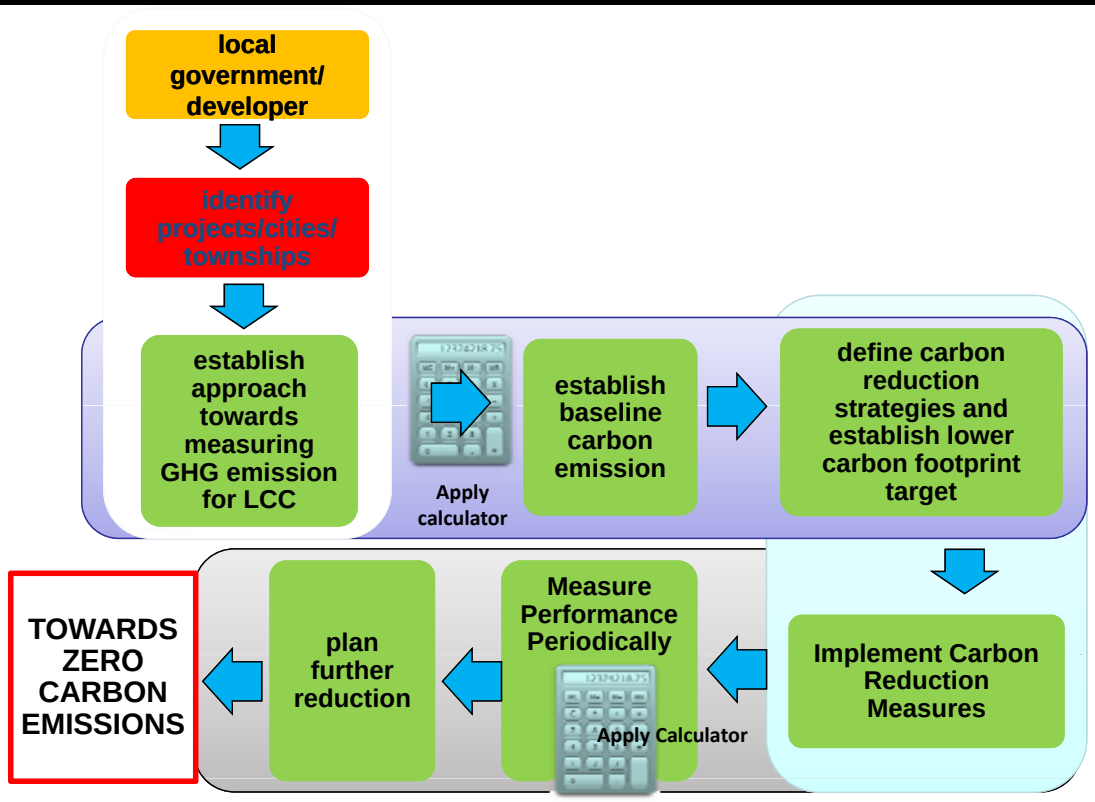
- Low Carbon Building
- Community Service

4 Elements Contribute to GHG emission

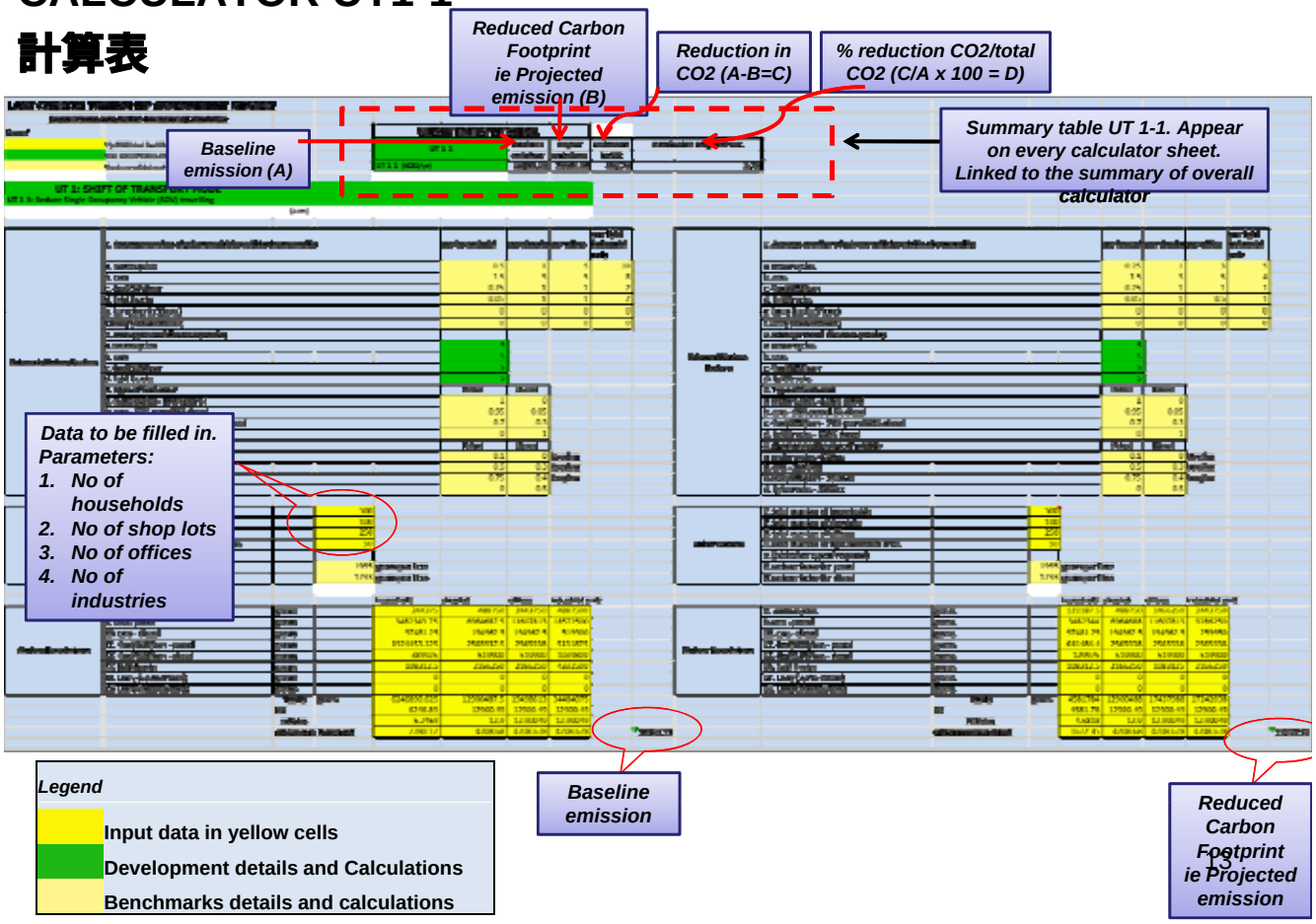
13 Performance Criteria*

35 Sub Criteria

PROCESS & PROCEDURE APPLICATION OF LCCF
LCCFのプロセスと手順の適用



CALCULATOR UT1-1
計算表



IMPLEMENTATION OF LCCF
LCCFの履行

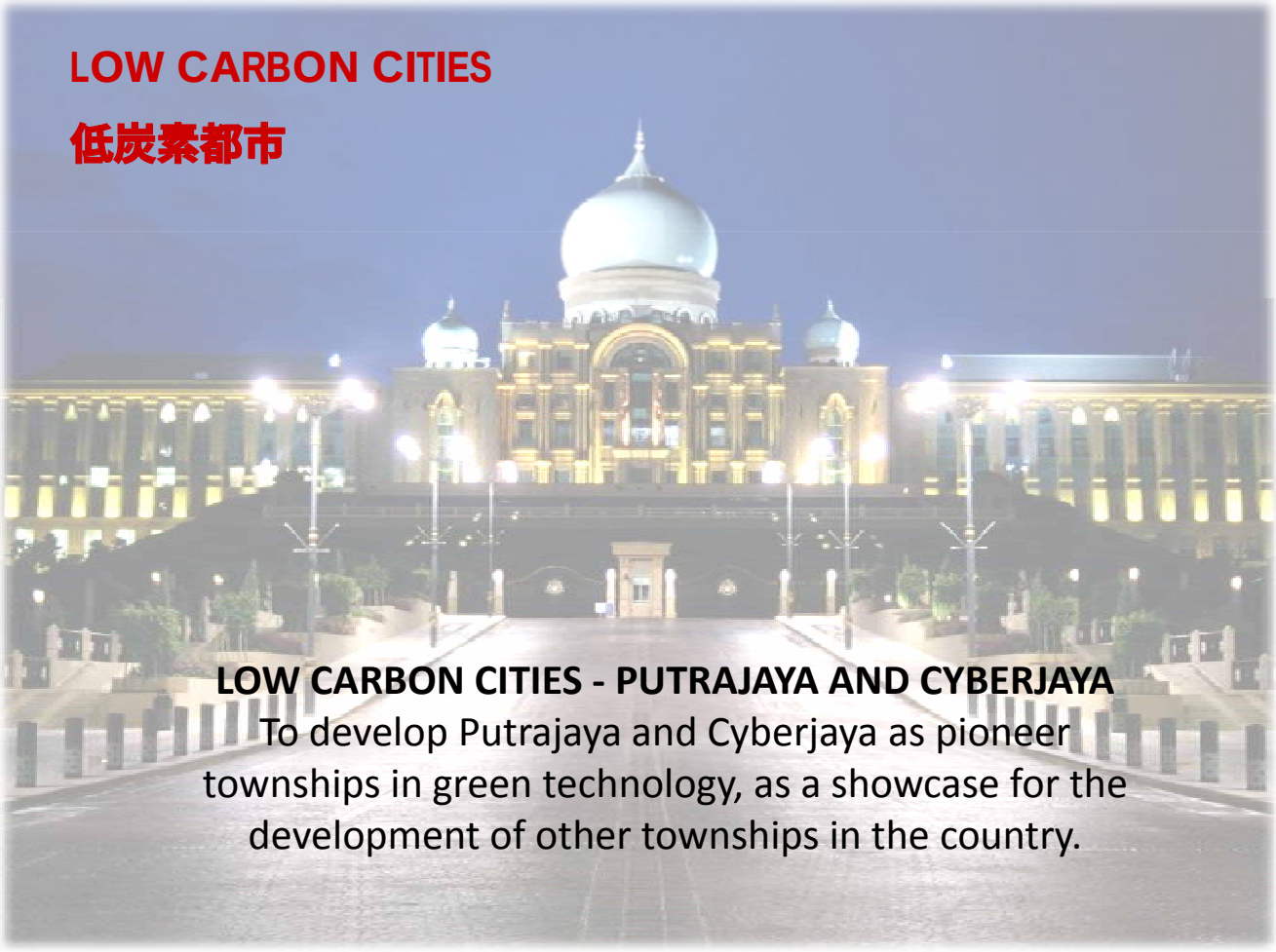
- strategic partnership programme initiated with local governments and developers
- 5 pilot projects to be implemented
- Training for trainers
- training for stakeholders
- Promotion / awareness campaign

LOW CARBON BUILDING - GREEN PASS
低炭素建築物 - グリーンパス

- assessment system developed by the Construction Industrial Development Board (CIDB)

- assess environmental impact of building

- provides two types of certifications :
  - buildings construction (site materials, energy, water and waste)
  - building operations (indoor environmental quality (IEQ), energy and water)



NEDO Putrajaya – Cyberjaya Low Carbon City Action Plan Project

NEDOプトラジャヤ - サイバルジャヤ 低炭素都市アクションプランプロジェクト

An international cooperation project by KeTTHA with NEDO, Japan

Action plans for both Putrajaya and Cyberjaya have been submitted

Further discussion with NEDO is needed on the way forward for this programme

OBJECTIVE OF THE STUDY
研究目的

The overall objectives of the project are:

I. To evaluate the current status of Putrajaya and Cyberjaya respectively in terms of green initiatives and green culture towards achieving Low Carbon City status;

II. To identify appropriate policies, actions and programmes in both Putrajaya and Cyberjaya towards achieving low carbon development and Low Carbon City status;

III. To obtain a baseline of current carbon emissions and future CO2 reduction scenario for Cyberjaya by using national framework - Low Carbon Cities Framework “LCCF”;

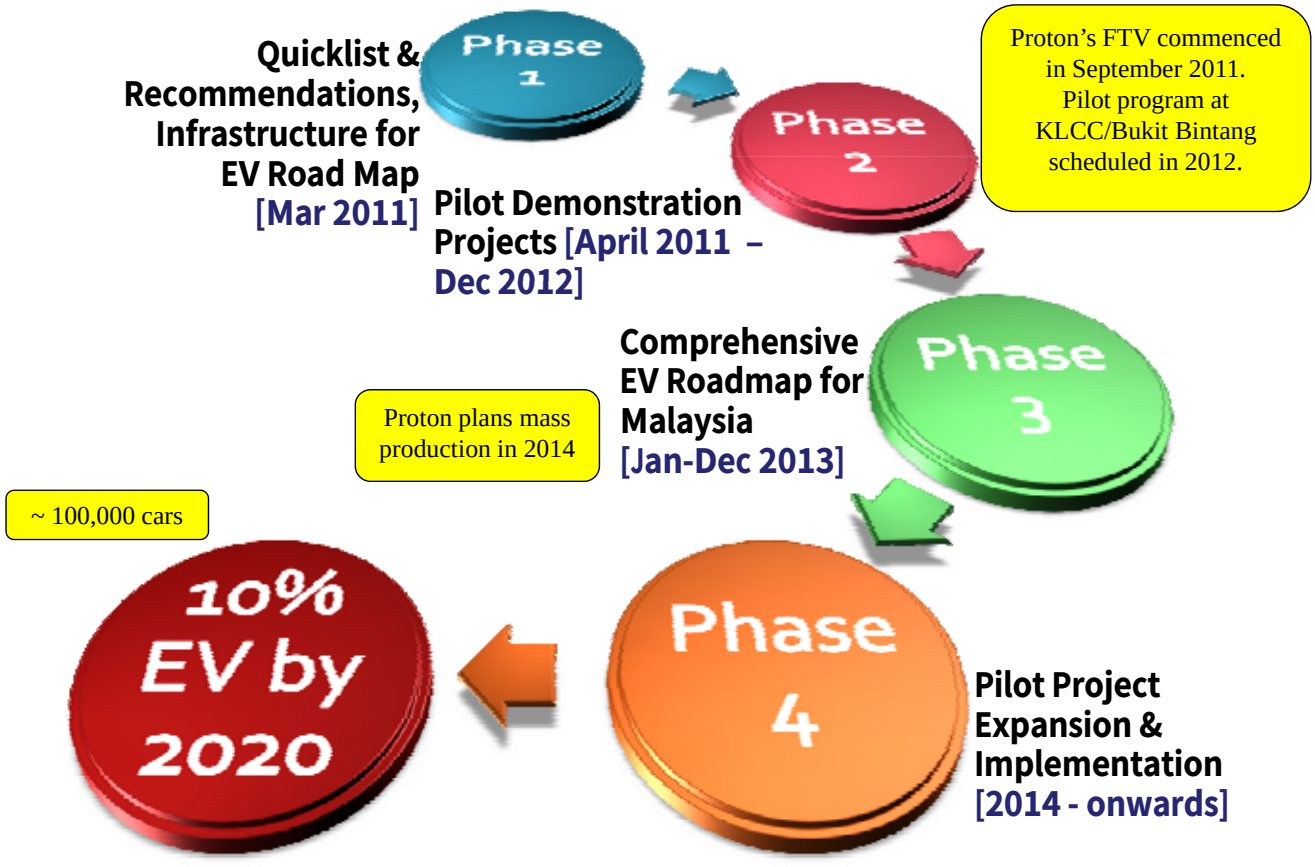
IV. To prepare comprehensive “Action Plan” containing certain Key Performance Indicator (KPI) and monitoring system in order to promote the actions towards achieving Low Carbon City in Putrajaya and Cyberjaya.

ELECTRIC VEHICLES
電気自動車

KeTTHA has initiated a programme to promote the development and usage of electric vehicles.

Working with Ministry of Transportation and Ministry of International Trade and Industry .

Cooperation with local car manufacturer PROTON to produce locally made electric Cars.



The Pilot Projects
試験的プロジェクト

- Proton Fleet-Test at Putrajaya / Cyberjaya
  - 200 EVs
  - 125 charging posts
  - Currently 9 EVs allocated and 7 charging stations installed

- KLCC Bukit Bintang
  - Privately initiated – Tan Chong, Mitsubishi, GE, Panasonic etc.
  - Target launch in Aug 2012

SMART GRID PILOT PROJECT
試験的スマートグリッドプロジェクト

- Smart grid pilot projects at 3 sites
  - Bayan Lepas, Pulau Pinang
  - Bukit Bintang, Kuala Lumpur
  - Medini, Wilayah Iskandar, Johor

- Objectives of smart grid pilot projects
  - To gain experience for future widespread application throughout the system
  - To get stakeholder's buy-in
  - To use as platform for proof of concept of certain smart grid technologies

OVERVIEW OF SMART GRID PILOT PROJECTS IN MALAYSIA
マレーシア スマートグリッドの概観

3

Bayan Lepas (North); represents industrial customers

Bukit Bintang (Central); represents commercial centre

Medini (South); represents green field area

WAY FORWARD
促進方法

Promotion of Low Carbon Cities through Demonstration Projects (i.e Smart Grids, EV, Effective Waste Management systems;

Encourage and facilitate technology transfer from counterparts of other successful nations;

To develop an effective funding mechanism for the development of Low carbon Cities to enable an inflow of investors; and

Increase the awareness level among the residents of a city/township to create a Low Carbon Society;

CONCLUSION
まとめ

- The development of Low Carbon Cities requires conducive policies and strategies formulated by the government;
- It also requires collaboration and cooperation from the private entities for it to be “private sector driven” ;
- The initiative also requires collaboration from foreign partners who are seeking to share technologies and knowledge in the area of green technology

THANK YOU!