



# **“ The Concept of the Low Carbon Town in the APEC” (1<sup>st</sup> Part )**

**Low Carbon Model Town Workshop  
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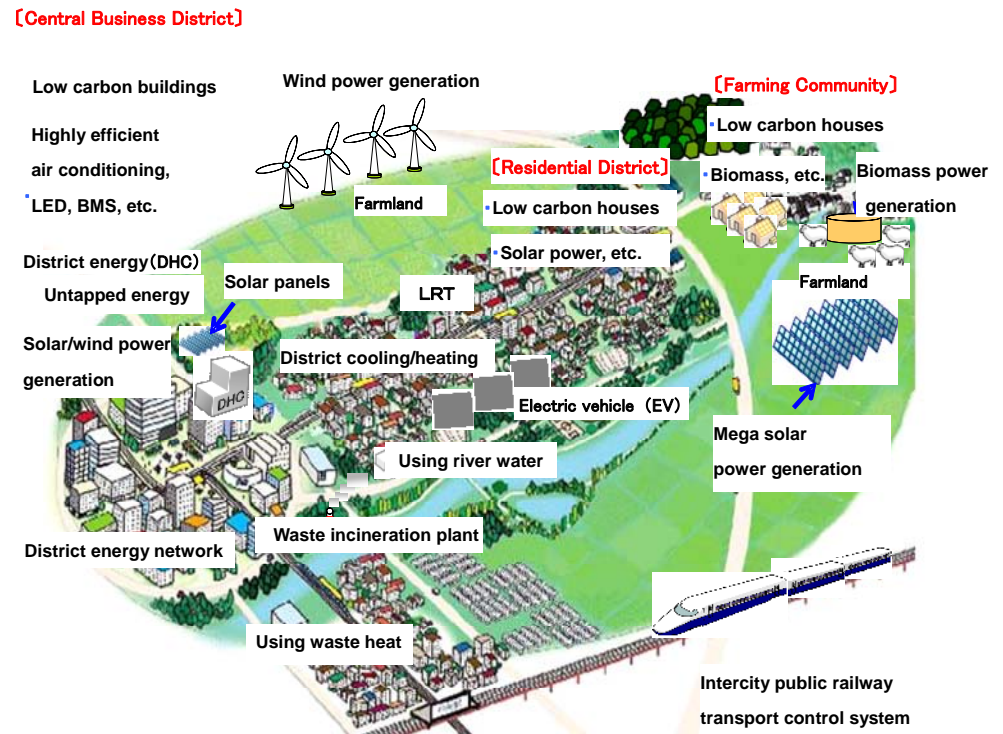


# What “The Concept of LCT” Covers ?

- The basics of what low carbon towns are.
- Basic approach to developing a Low Carbon Town
- Measures to use in the development of a Low Carbon Town
- Evaluating the effect of Low Carbon Measures

# What is the APEC “Low Carbon Town (LCT)”?

LCT means towns, or cities, and villages which seek to become low carbon with a quantitative CO<sub>2</sub> emission target and a concrete low carbon developing plan, irrespective of its size, characteristics and type of development.



## How “The Concept of LCT” Developed?

- The “Concept of LCT” has been developed through a self-funded preparatory study by Japan.
- The draft “Concept of LCT” was reviewed by Study Group A and LCMT Task Force.
- The Concept will be further developed through studying best practices being implemented in the APEC region.
- For this purpose, Study Group A visited several planned or on-going low-carbon urban development projects in the APEC region in June 2011.

# Study Group A Has an Important Role to Collect Information on Low Carbon Development Projects

Member: China, Indonesia, Japan, Malaysia, Philippine, Thailand, Chinese Taipei, Viet Nam

Towns visited: Da Nang (Viet Nam), Surabaya (Indonesia), Samui (Thailand), Cebu (Philippine), Putrajaya (Malaysia) Tianjin (China)



# Indicators to Assess Low Carbon Objectives

Direct Indicators to assess low carbon objectives:

- Reduction in CO<sub>2</sub> emissions: t-CO<sub>2</sub>/year, t-CO<sub>2</sub> /year-floor space
- Reduction in CO<sub>2</sub> emissions per GDP
- Reduction in CO<sub>2</sub> emissions per GD
- CO<sub>2</sub> emissions reduction rate (%)

Indirect Indicators to assess low carbon objectives:

- Reduction in the amount of traffic
- Public transportation conversion rate
- Reduction in waste produced
- Water recycling rate

# Cities strive for Green and Clean



Cebu



Da Nang



Surabaya

## **SIMPLE WASTE WATER TREATMENT SYSTEM, Village Scale**

The use of off-site treatment system with centralized piping became the communal waste management facilities in densely populated residential area in Surabaya.

# Overall Planning to Develop a Low-Carbon Town

A full and complete understanding of an upper level low carbon plan is essential.

## 1<sup>st</sup> Stage: LCT Development Plan

Refer to an ordinary town development plan

Make a target area clear

Grasp the characteristics by categorization

## 2<sup>nd</sup> Stage: LCT Strategy

Collect data on energy use and CO<sub>2</sub> emission

Set quantitative low carbon targets

List low carbon measures

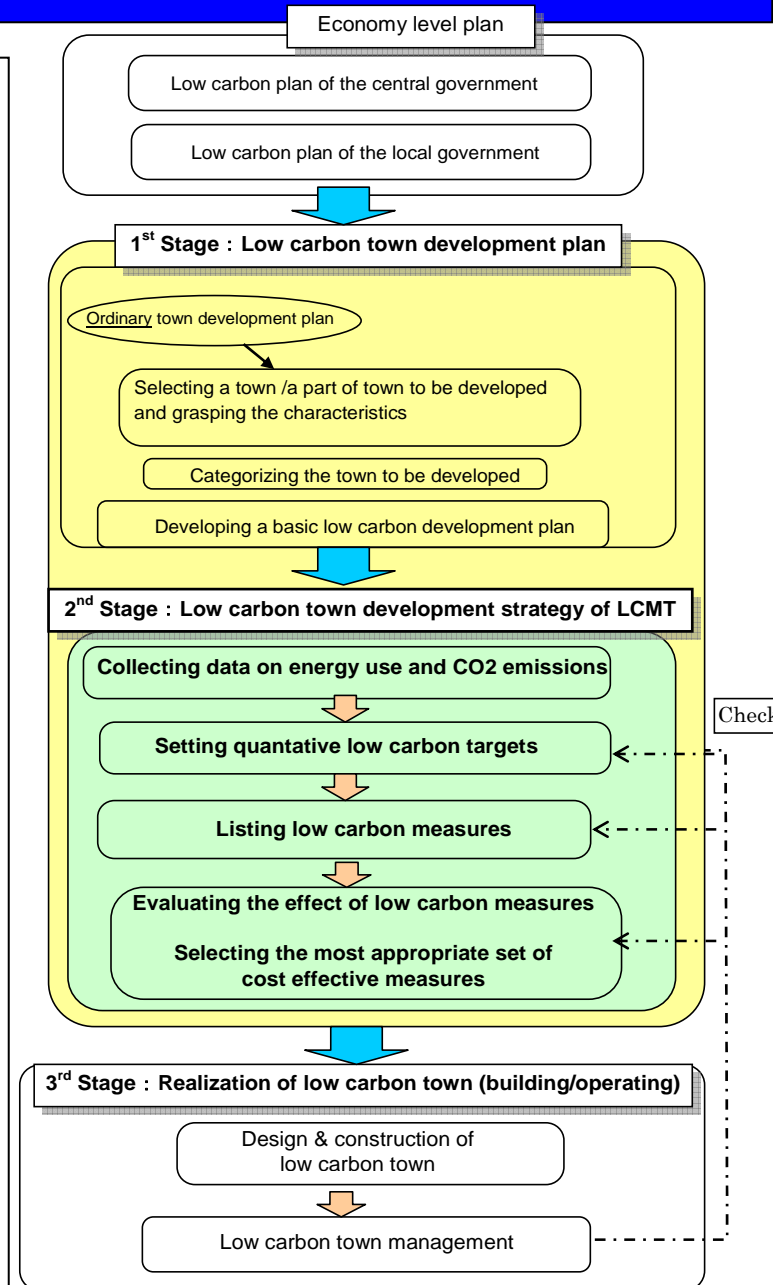
Evaluate the effects of low carbon measures

Select the most appropriate set of measures

## 3<sup>rd</sup> Stage:

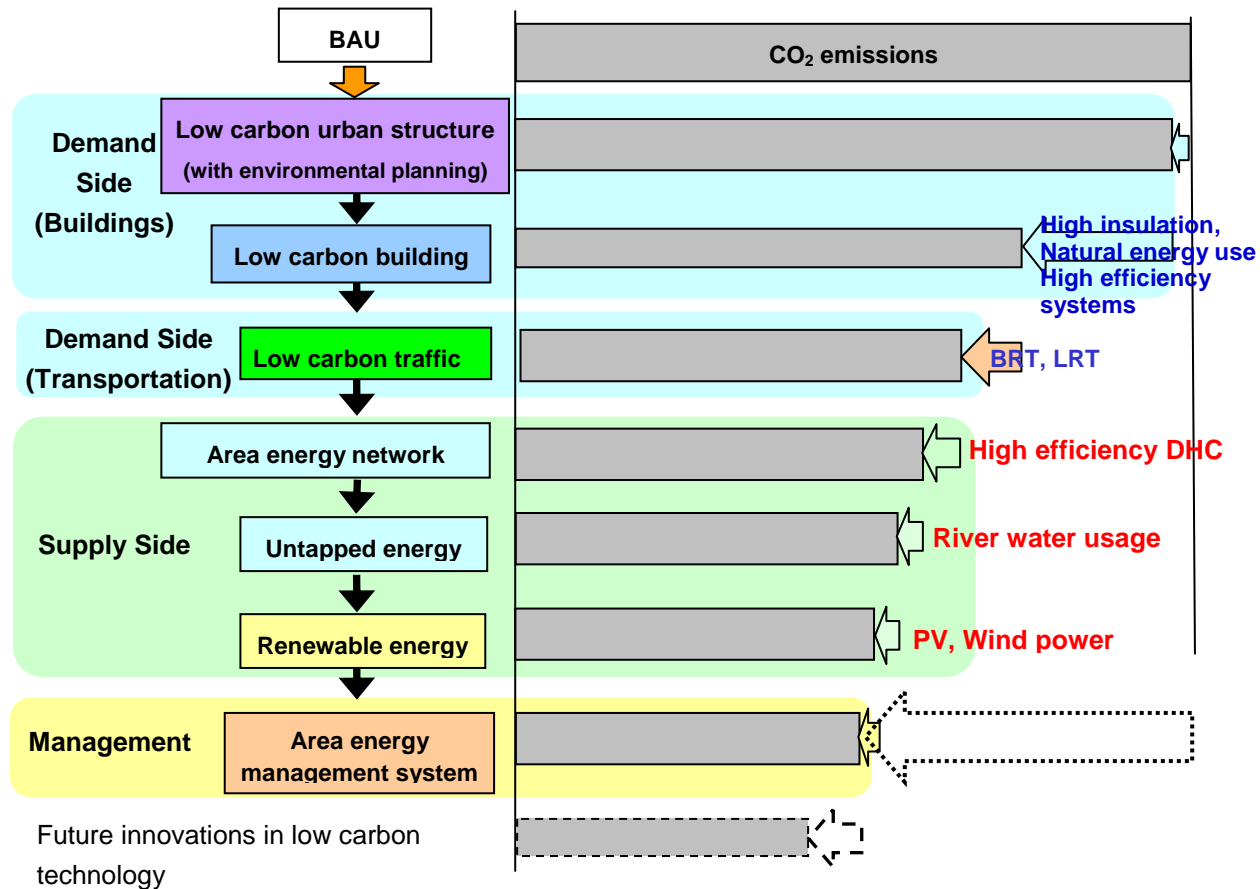
Design and construct

Manage low carbon town



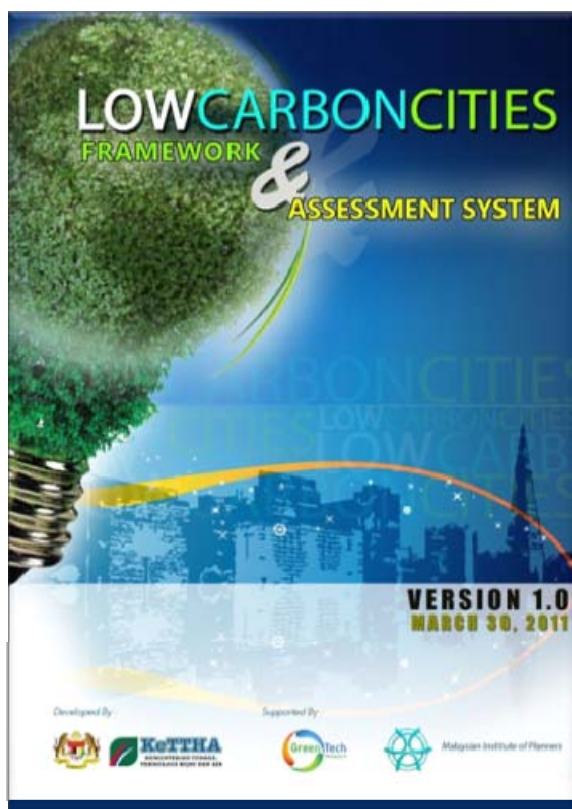


# Feasibility Study Reviews LCT Strategy of the Intended Town



# LCT Guidebook Developed by APEC Economies (1)

## Low Carbon Cities Framework & Assessment System in Malaysia



### BOOK 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

### BOOK TWO – Assessment System

5

#### The Low Carbon Cities Assessment System (LCCAS) Calculator – Concepts And Principles

1. About the LCCAS Calculator
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 LCCAS Calculator
2. Summary Sheet

# LCT Guidebook Developed by APEC Economies (2)

## Technical Methods and Guidance Documents for 2007 CEEI Reports

Community Energy and Emissions  
Inventory (CEEI) Initiative

Draft- May, 2010  
Ministry of Environment  
Victoria, B.C.

## Table of Contents

1. Introduction
2. Context for CEEI Reporting
3. CEEI Reporting- Purpose, Principles and Use
4. CEEI Reporting Foundations
5. On-Road Transportation Sector
  - 5.1 Protocol and Guiding Principles
  - 5.2 Components Included and Excluded
  - 5.3 Methodology
  - 5.4 Data sources
  - 5.5 Data Accuracy
  - 5.6 Planned Improvements
6. Residential Commercial and Industrial Building Sector
7. Municipal Solid Waste Sector
8. Land-Use Change-Deforestation Sector
9. Agriculture- Enteric Fermentation Sector
10. Supporting Indicators

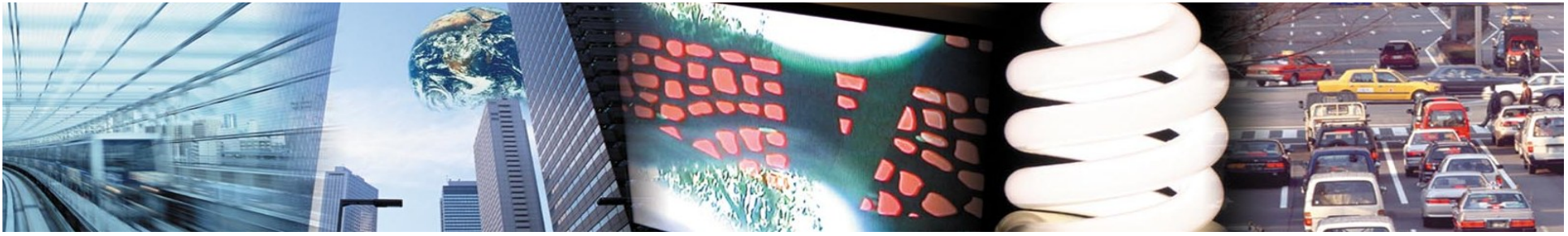
# Comments and suggestions to Refine “the Concept of LCT”

- Low carbon targets are designed to be town specific, and are not broad-based ones that would apply across all APEC economies.
- Aspects of creating a livable town that contributes to overall sustainability is vital.
- The planning of a low carbon town requires considerable public inputs. This element should be incorporated in the integrated design review process
- If the project is to keep going, it is essential to gain buy-in from champions among all groups of people involved and affected.
- Training must be included within the methodology for building operators and maintenance personnel in order to maximize the positive impact of the change.

## Next Step to Further Refine “The Concept of LCT”

- To gather more information on the actual situation of low carbon town development planning. (Site visits, ESCI Action Network)
- To share best practices low carbon policies, measures and technologies in the APEC region.

***Your input to “the Concept of Low Carbon Town in the APEC Region” is highly appreciated.***



**Thank you for your kind attention**

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