

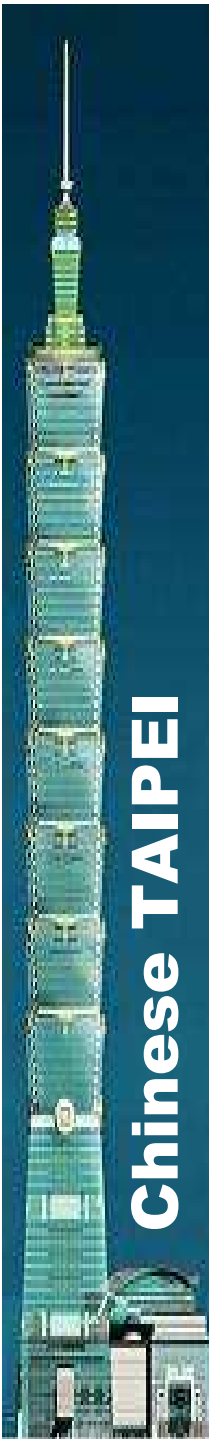


*APEC New & Renewable Energy Technologies Expert Group Meeting
35th Meeting, October 12-15, 2010, Tokyo, Japan*

Low-Carbon Community & Society in Chinese Taipei

Yu-Chin Huang
Bureau of Energy
Ministry of Economic Affairs

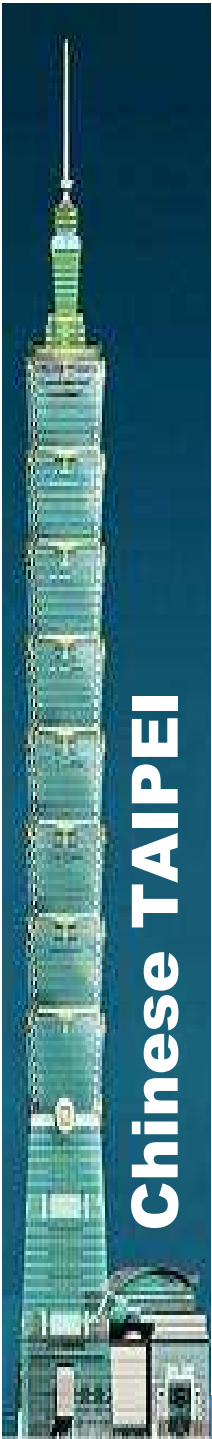
October 12-15, 2010, Tokyo, Japan



Outline

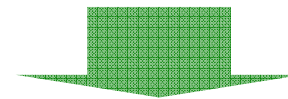


- Low Carbon Policy in Chinese Taipei
- Master Plan on Energy Conservation and Emission Reduction
- Low Carbon Community & Society Projects
- Low Carbon Island Demonstration
- Concluding Remarks

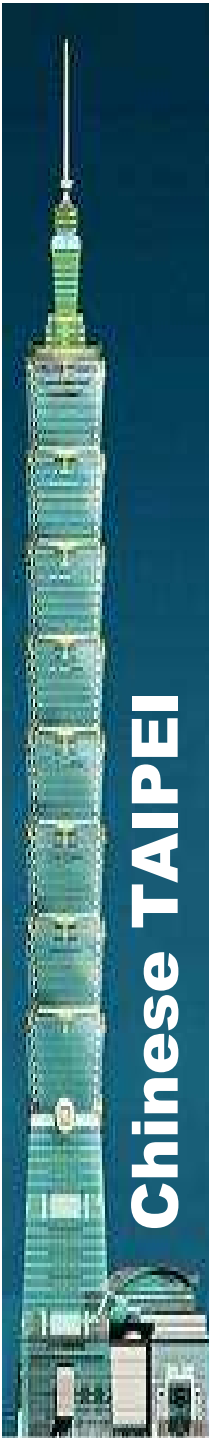


Low Carbon Policy in Chinese Taipei

Jun. 5, 2008	Framework of Sustainable Energy Policy
Apr. 14-15, 2009	3rd National Energy Conference
Apr., 2009	Green Energy Industry Program
Jul. 8, 2009	Renewable Energy Development Act Amendment of Energy Management Law
Nov. 20, 2009	Special Report on Energy Conservation and Emission Reduction
Dec., 2009	Establishment of the Committee on Energy Conservation and Emission Reduction
May, 2010	Approval of the Master Plan on Energy Conservation and Emission Reduction



Developing a Low Carbon Energy Structure by 2025



Renewable Energy Development Act in Chinese Taipei

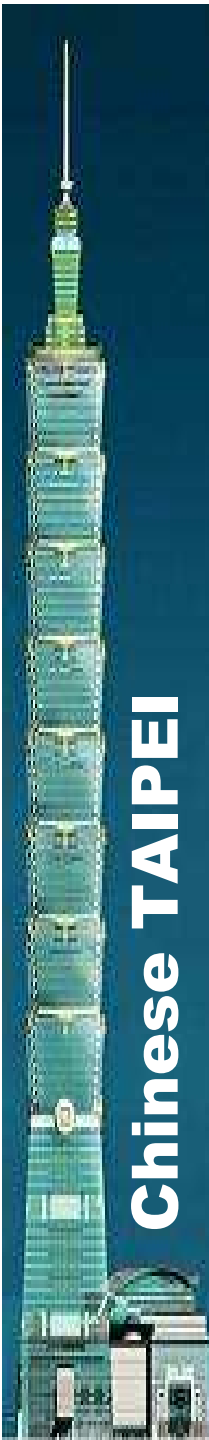
July 8, 2009

The breakthrough of market competition and installation barriers for renewables:

Obligation: power utility operating grid obligated of grid connection and purchase of renewable electricity; public constructions prioritized of utilizing renewable energy

Incentive: fixed feed-in tariffs for renewable electricity; subsidies for installations

Deregulation: removal of limitations for land use and requirements for installing of self-usage power facilities



Master Plan on Energy Conservation and Emission Reduction

> Objectives <

(1) Energy Efficiency

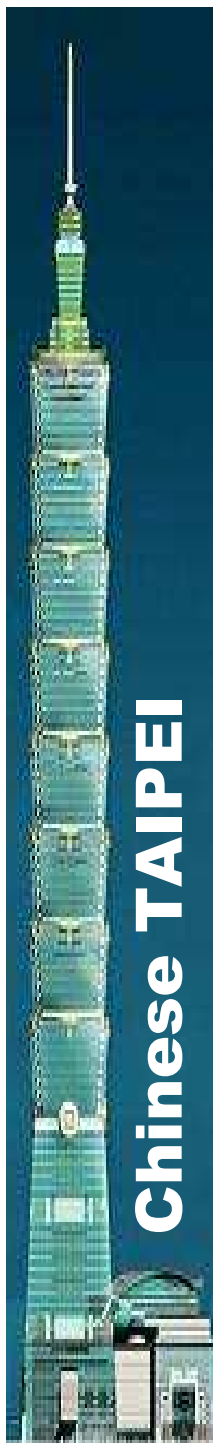
- Reducing energy intensity by 2% per annum and totally up to 25% by 2015.
- Reducing energy intensity by 50% by 2025 with technological breakthrough and administrative measures.

(2) Emission Reduction

- Reducing CO₂ emissions to 2005 levels by 2020, and further to 2000 levels by 2025.

(3) Low Carbon Energy

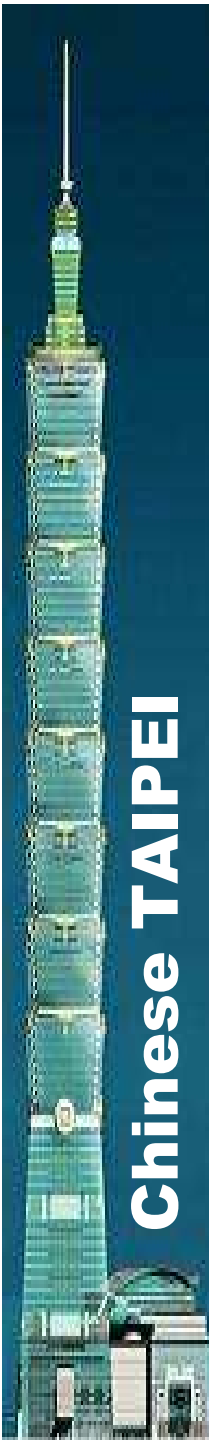
- Increasing the share of low carbon energy in electricity generation system to 55% by 2025.



Master Plan on Energy Conservation and Emission Reduction

> 10 Landmark Programs <

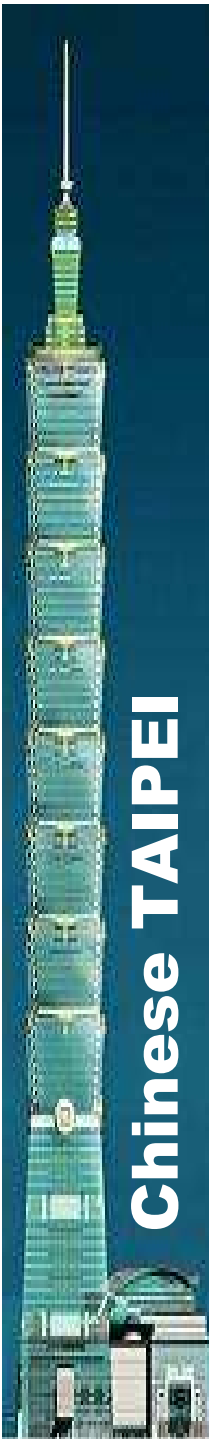
01. Sound Legal Framework (4 projects)
02. Low carbon Energy System (4 projects)
- 03. Low Carbon Community & Society (4 projects)**
04. Low Carbon Industry (4 projects)
05. Green Transportation (5 projects)
06. Green Agriculture & Building (4 projects)
07. Energy Saving and Emission Reduction Technology (2 projects)
08. Low Carbon Public Construction (3 projects)
09. Energy Saving and Emission Reduction Education (3 projects)
10. Public Education (2 projects)



03. Low Carbon Community & Society Projects

> 4 Projects <

- (1) Low Carbon Community Demonstration Project (~2011)
- (2) Low Carbon City Demonstration Project (~2014)
- (3) Low Carbon Island Demonstration Project (~2014)
- (4) Energy Conservation and
Emission Reduction Movement (~2020)



Low Carbon Community & Society Projects

(1) Low Carbon Community Demonstration Project

> Schedule <

2010: 25 low carbon communities

2011: 50 low carbon communities
2 demonstration low carbon communities
in each counties.



Low Carbon Community & Society Projects

(2) Low Carbon City Demonstration Project

> Schedule <

2010: Project planning.

2011: Selection of demonstration sites (4 sites)

2014: Project completion



Chinese TAIPEI

Low Carbon Community & Society Projects

(3) Low Carbon Island Demonstration Project

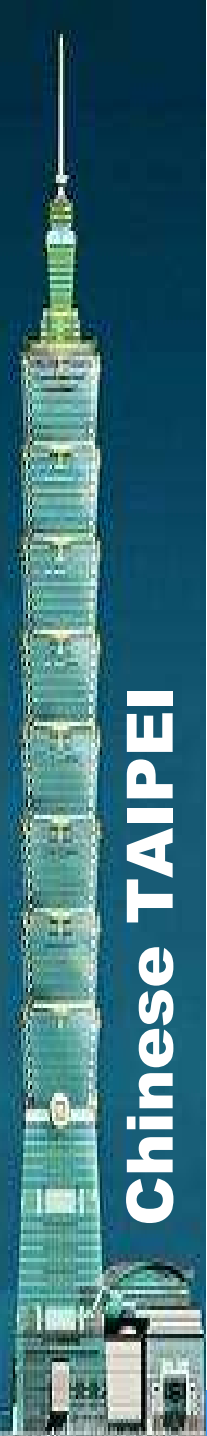
> 4 Demo Sites <

Kinmen

Penghu

Green Island

Siaoliuciou



Low Carbon Community & Society Projects

(3) Low Carbon Island Demonstration Project

> **Schedule** <
2010 ~ 2014

> **Target** <

(a) Reduces 62% of CO₂ emission in 4 islands
(0.33 Mt/ yr in Penghu)

(b) Renewable power generation exceeds the local
electricity demand.

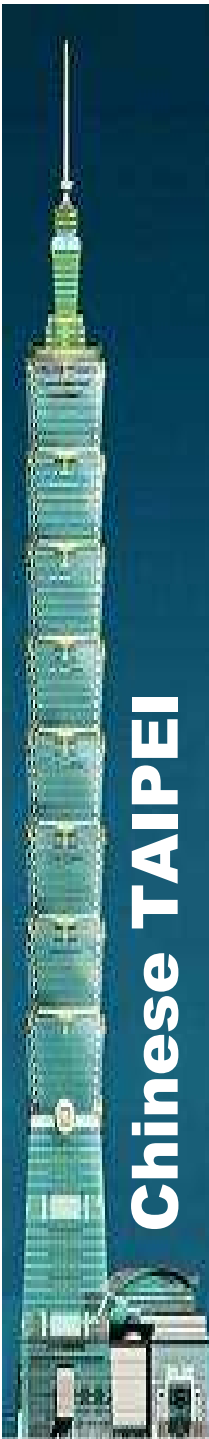
(c) CO₂ emission per capita decreases to 2.1 t/yr



Low Carbon Community & Society Projects

03. Low Carbon Island Demonstration Project
Things to Do in Penghu Islands

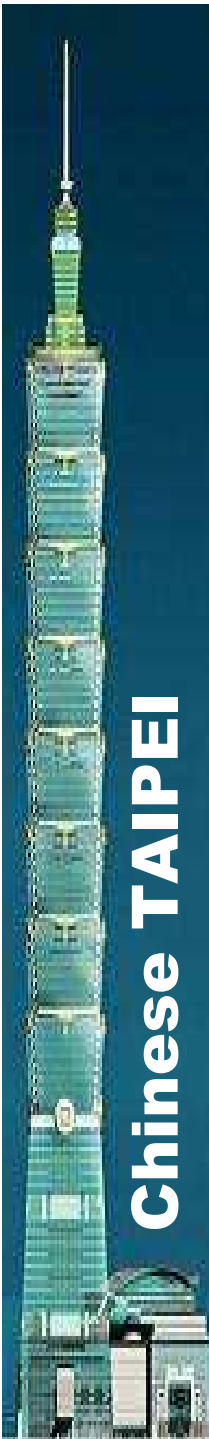
1	Renewable Energy	<ul style="list-style-type: none">➤ New installed wind turbines: 96 MW➤ BIPV: 2 MW➤ Solar water heaters: 1,000 households
2	Energy Conservation	<ul style="list-style-type: none">➤ Smart metering: 2,106 households➤ LED streetlamps: 4,000➤ Energy saving appliances: 21,000
3	Low Carbon Transportation	<ul style="list-style-type: none">➤ Electric scooters: 6,000➤ Hybrid buses: 61➤ B2 biodiesel + E3 gasohol



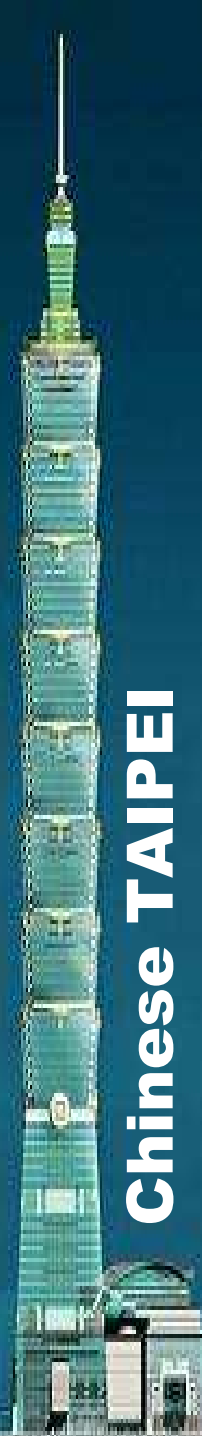
Low Carbon Community & Society Projects

03. Low Carbon Island Demonstration Project
Things to Do in Penghu Islands

4	Low Carbon Buildings	<ul style="list-style-type: none">➤ New buildings with 100% Green Building Certificates➤ Enhancing Green area: 330 ha
5	Resource Recycling	<ul style="list-style-type: none">➤ Dropping the water leaking rate from 32% to 25%➤ Zero waste➤ Decreasing supply of sea water desalination: 5,700 t/d
6	Low Carbon Life	<ul style="list-style-type: none">➤ Low carbon education➤ Low carbon labels➤ Low carbon culture➤ Promoting public participation



Future Scene of Penghu Low Carbon Island



Water Saving
and
Recycling



Large-scale Wind Turbine



Photovoltaics
(MW-level Parking lot)



Entrance of the Airport



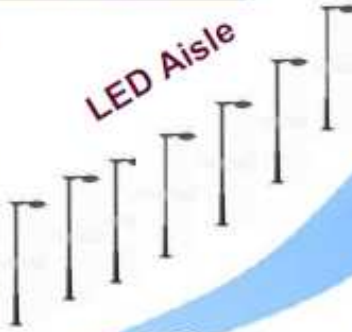
Hybrid Power Bus



Bridge with
Photovoltaics



Guest House
Solar Water
Heater



LED Aisle



PV Spotlight/Cafe

Magong City



PV for EV &
Charge Station



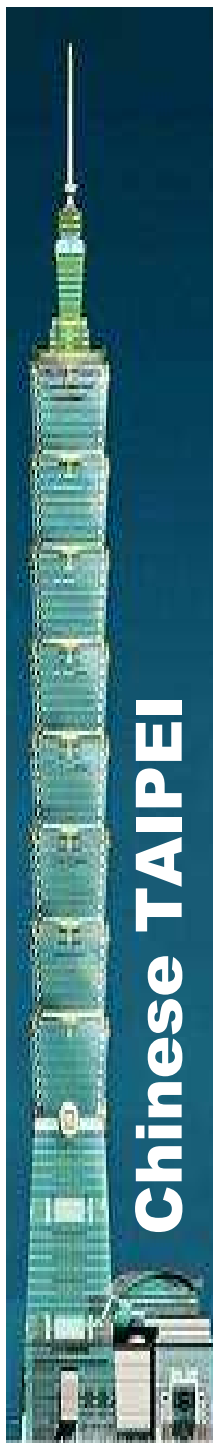
PV Bus Shelter

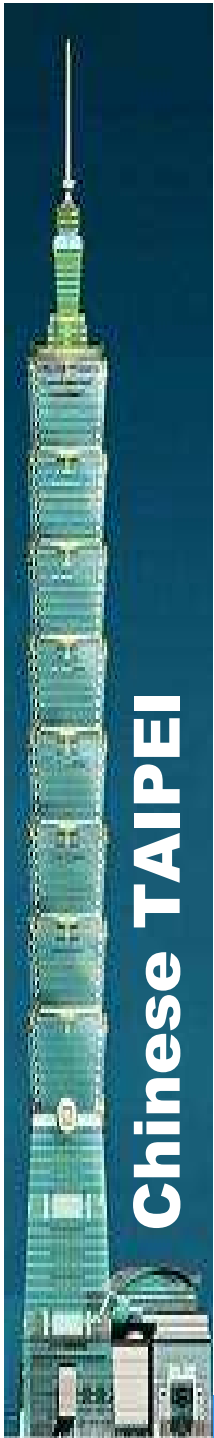


Greening

Concluding Remarks

1. Facing the challenge of the global warming, Chinese Taipei regards the low carbon energy development as its major strategy to reduce the dependence on fossil fuel and GHG emissions.
2. Chinese Taipei has already been the fifth APEC member economy to participate in the program of PREE.
3. The challenge of the global warming is an opportunity for the development of green energy industry.
4. The international cooperation within the field of low carbon energy is important.
5. We believe, Chinese Taipei could learn by doing and transform into a low carbon society and create a sustainable low carbon economy.





4 x 600 kW wind turbines, Chungtun, Penghu, Chinese Taipei

Thank you for your attention.