



Knowledge Sharing Platform (KSP) Workshop
for the Energy Smart Communities Initiative
ESCI Executive Meeting

**Implementing Low Carbon Campus
Projects in Schools & The Publicity
and techniques of energy-saving to
the public**

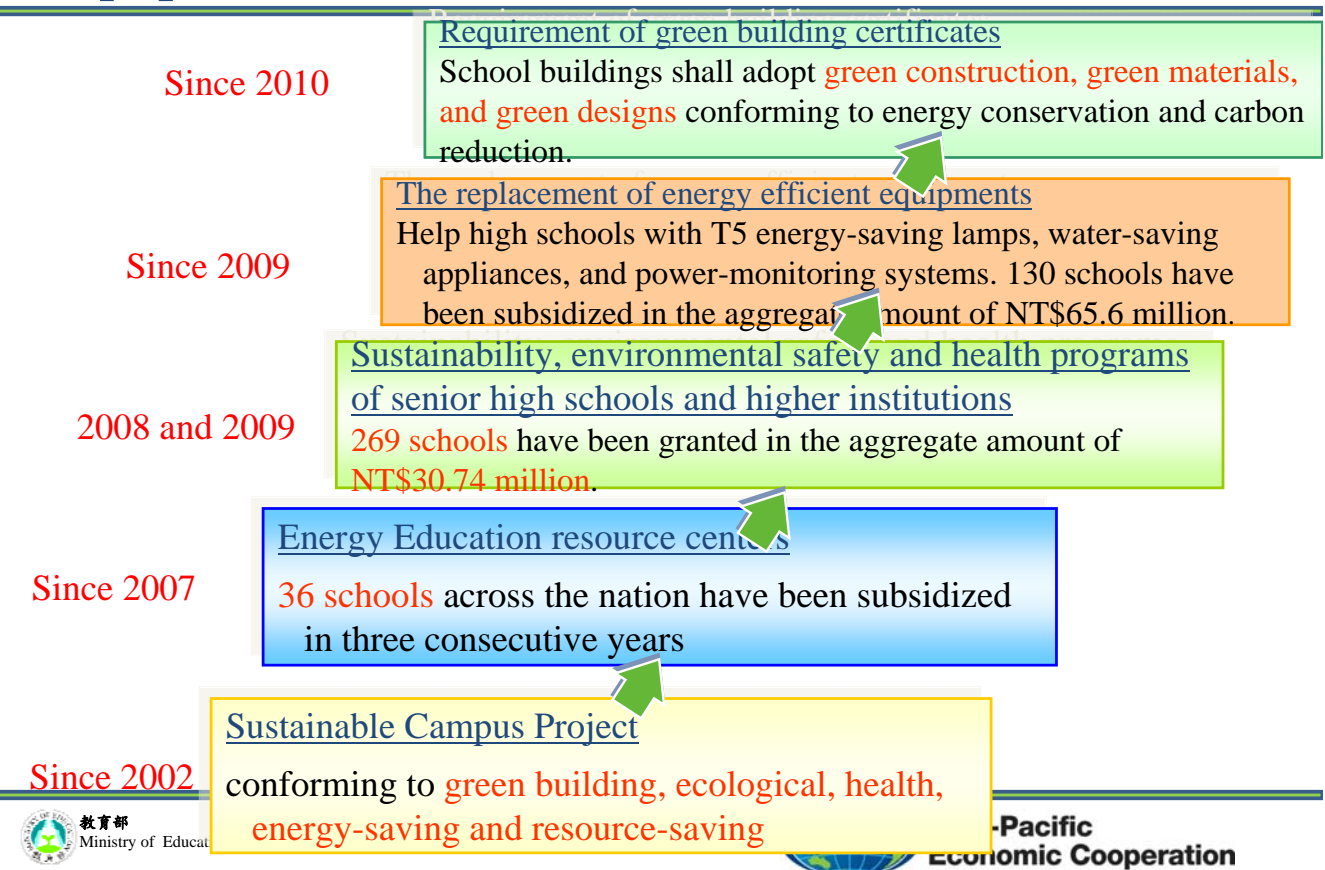
Professor Tzu- Chau Chang
Ministry of Education

October 18, 2011

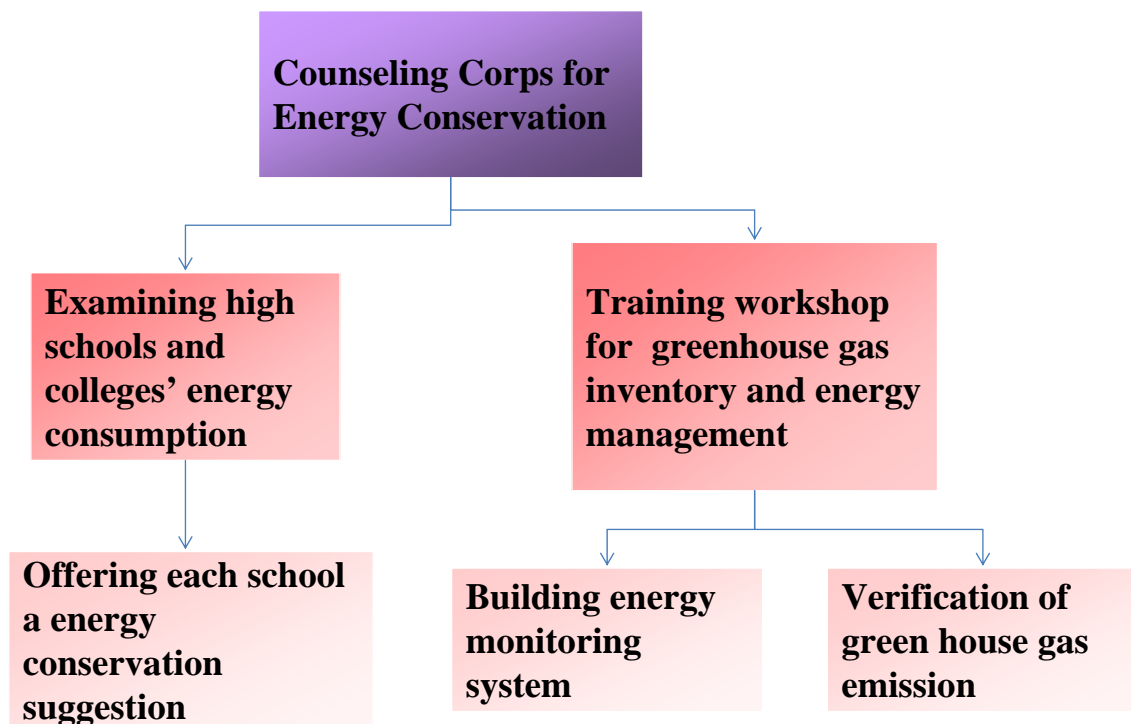
Presentation Outline

- I. To improve energy efficiency of school buildings and equipment**
- II. To strengthen campus environmental management**
- III. To promote education for sustainability**
- IV. The result of the sustainable campus project**
- V. The Publicity and techniques of energy-saving Strategies to the public**

I. To improve energy efficiency of school buildings and equipment

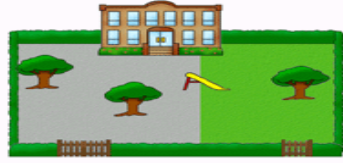


II. To strengthen campus environmental management



III. To promote education for sustainability

Sustainable Campus Project



Design your own Eco-friendly playground

Sustainable Campus

Ecological campus

Biodiversity
Retention of native species
Sewage ecological treatment model
Natural system for water recycle and reuse
Symbiosis ecology etc.

Ascertain the creation of the ecological environment

Sustainable Building Technology

Green Building Rating System
Green Building Construction Technology
Healthy Building Technology
Energy recycling
Recycling of resources etc.

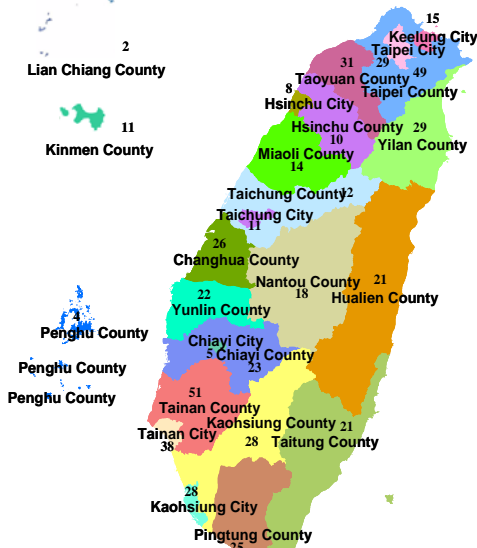
Enhance the application of new industrial technology

Education for sustainability

1. Campus environment policy
2. Campus space building and environment management
3. Environmental education : teaching and learning
4. Green living in campus

IV. The result of the sustainable campus project

From 2002 to 2011, subsidies have been granted **839** times to schools for the reform plan.



From 2002 to 2011, the quantity and distribution of sustainable campus



V. The Publicity and techniques of energy-saving Strategies to the public

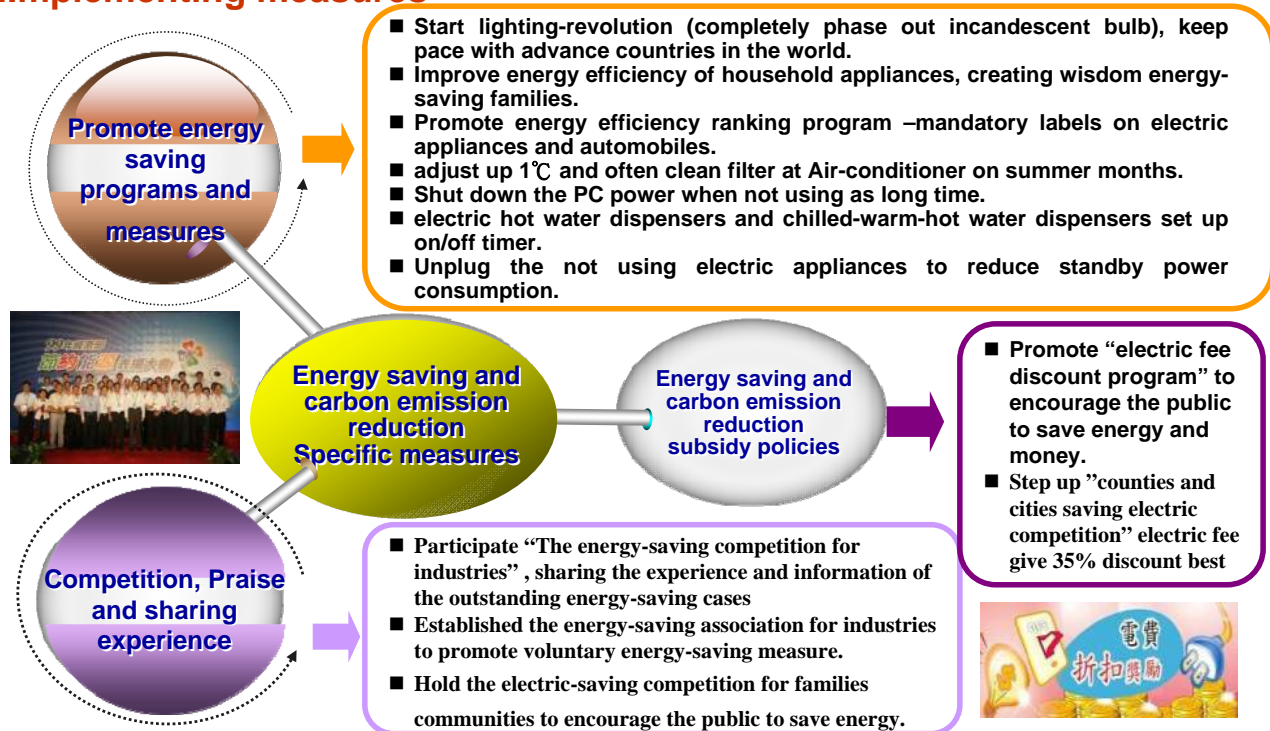
1. Implementing strategies

Disseminate energy-saving conception and methods, guiding public to do energy saving and emissions reduction manners.



V. The Publicity and techniques of energy-saving Strategies to the public

2. Implementing measures



V. The Publicity and techniques of energy-saving Strategies to the public

3.Outstanding Results (continue...)

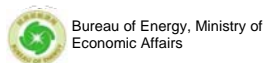
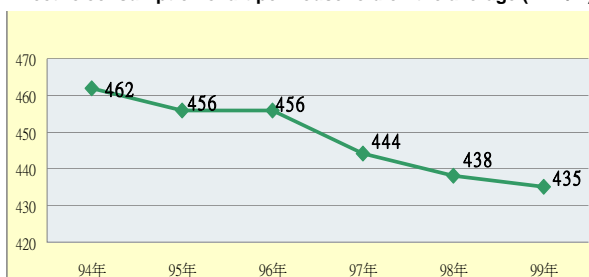
(1)Promote six important energy-saving measures

(Electric consumption every family on the average : 462 kWh/Month(2005) → 435 kWh/Month (2010); the total saving electric was 284 million kWh/Y from 2009 to 2010.)

- Promote high-efficiency lamps, replacing incandescent bulb by Compact Fluorescent Lamp.
- Promote energy-saving on/off timer, electric hot water dispensers and chilled-warm-hot water dispensers set up on/off timer.
- Promote air-conditioner energy saving, adjust up 1°C and often clean filter on summer months.”
- Promote PC energy saving, Shut down the PC power when not using as long time.
- Promote standby power saving, Unplug the not using electric appliances to reduce standby power consumption.
- Turn off light a hour on the noon in government department and commercial buildings.



Electric consumption chart per household on the average (kWh/M)



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V. The Publicity and techniques of energy-saving Strategies to the public

3.Outstanding Results (continue...)

(2)Establish and promote the mandatory Energy Efficiency Labeling Program for electrical appliances according to high marketing share, high power consumption, obvious difference in efficiency, and the international trend. In Taiwan, We have announced and regulated 6 kinds of electric appliances for this program.

■Promotion results:

- The average percentage for products posted with efficiency labels to the whole market is 97% according to the statistical investigation over the totally 7,085 domestic selling points in Taiwan due the end of 2010.
- The program leads the consumers to buy high efficient products with one level improved what conserve 100 million kWh of electricity.

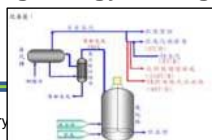
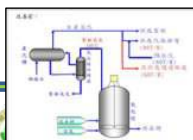


(3)Hole the awarding ceremony for the outstanding energy conservation units (including industries, Residential/commercial, public administration , government and school sectors etc.

- For example, the outstanding energy conservation units to win the prize save the energy amount up to 233 thousand KLOE in 2011. The saving amount is equal \$NT 3 billion and reduce 610,000 metric tons CO2.
- Collecting the outstanding energy-saving cases and technologies to construct a public energy conversation network platform.

(4)Constructing the energy-saving information platform to share outstanding energy-saving cases

- Collecting all the outstanding energy-saving cases in the past. The cases is classified as equipments' or industries' categories to spread widely by network, energy-saving manual and energy-saving demonstration.
- Accumulating energy-saving cases over 1,000 cases form 2007 to 2010.



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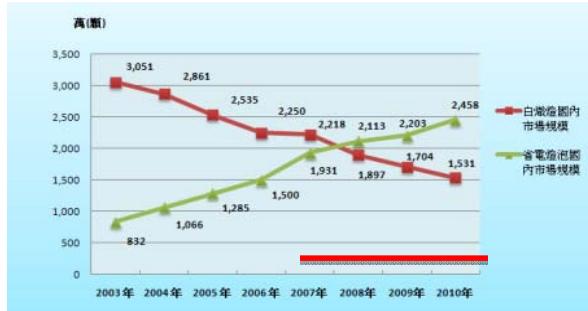
V. The Publicity and techniques of energy-saving Strategies to the public

4.Promoting cases I -585 phase out incandescent bulb program

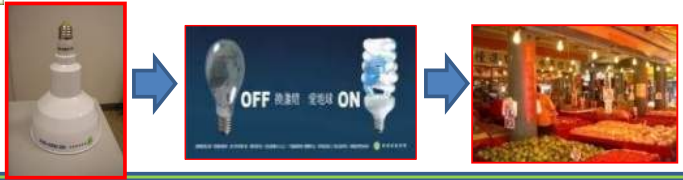


- 2007 22,180,000 incandescent bulb
- 2010 15,310,000 incandescent bulb
- The amount descent 30%
- Saved 249 million kWh
- Reduced 152,000 metric tons of carbon emission.

- Bulletin incandescent bulb energy efficiency standard (2012.01.01 effective)
- Promote school to phase out incandescent bulb
- Promote traditional retailer to phase out incandescent bulb.
- Promote flower farm to phase out incandescent bulb.
- Promote families to phase out incandescent bulb.
- Promote lighting revolution to exhibitions domestic.



Reduce 10,322 bulbs from 2008 to 2010.
 Saved 2,800,000 kWh/Y.
 Public retailer don't use incandescent bulb over 90%.



V. The Publicity and techniques of energy-saving Strategies to the public

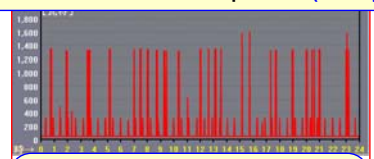
4.Promoting case II – Families and offices promoting mode of cloud computing technology

- ◆ virtual laboratory. (Constructing energy consumption testing equipment of families and offices).
- ◆ Continually, collecting and analyzing electric consumption data to find energy-saving measures and manners.

•chilled-warm-hot water dispensers. (non-holiday)



•chilled-warm-hot water dispensers. (holiday)



•Save 224 kilograms of carbon emission a piece per year by turning of power two days (holiday).



Information share online offices' and families' energy saving manners



•Electric bottle

•refrigerator

•Storage Water Heaters

Thank you for your attention!



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