



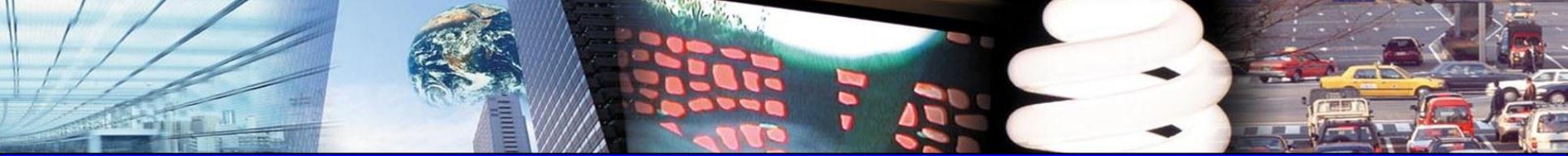
APERC Workshop at EWG 46, Da Nang, Viet Nam
18 November 2013

***5. Cooperative Energy Efficiency Design
for Sustainability (CEEDS) Phase 4
‘Promotion of Energy Service Company: ESCO’***

Kazutomo IRIE
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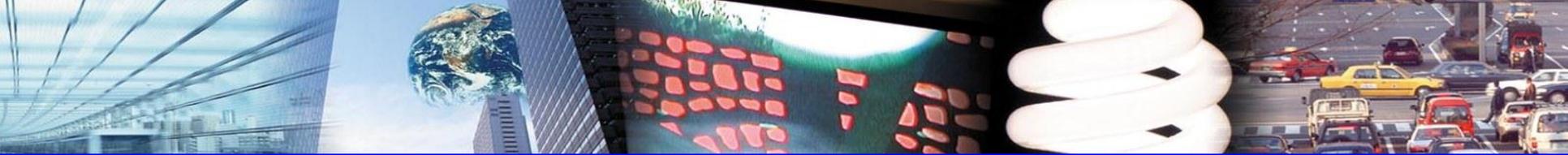


Asia-Pacific
Economic Cooperation



Outline

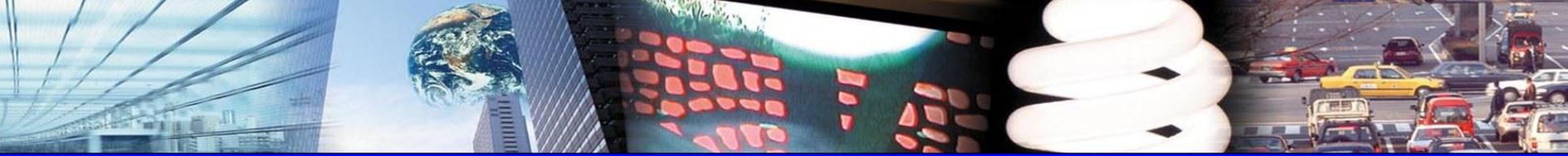
- 1. Objectives of CEEDS**
- 2. History of CEEDS**
- 3. CEEDS Phase 4: 1st Workshop in Bangkok**
- 4. CEEDS Phase 4: 2nd Workshop in Taipei**
- 5. Future Shape of CEEDS**



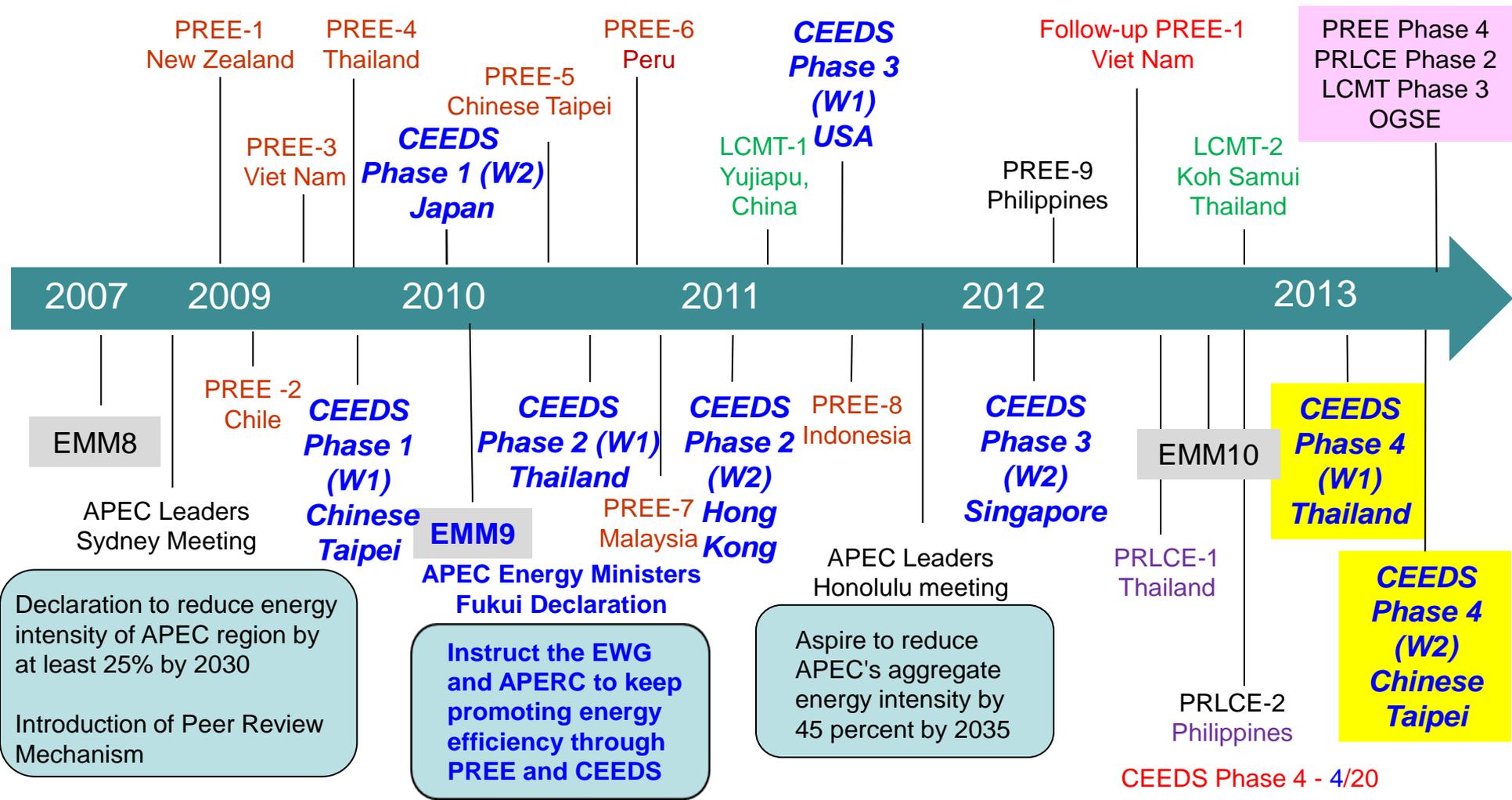
1. Objectives of CEEDS

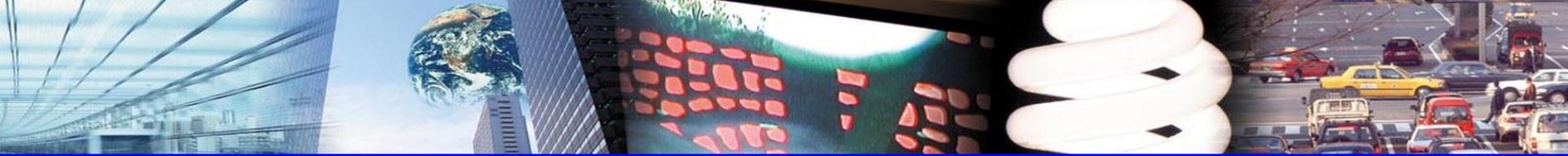
Referred in APEC Energy Ministers' 2010 Fukui Declaration

- To promote “high-performance” energy efficiency policy measures in developing economies in the APEC region.
- To assist developing economies who wish to design and implement measures for achieving energy efficiency improvements in a specified sector.
- Two workshops is organized:
 - One is an analysis of potential energy savings that might be obtained in the APEC region if each participating developing APEC economy were to adopt the high-performance measures.
 - The other is focusing on how these measures might be implemented in developing APEC economies.
- CEEDS considers policies and practices for several developing economies in one sector at a time. ⇔ PREE: One economy, all sector



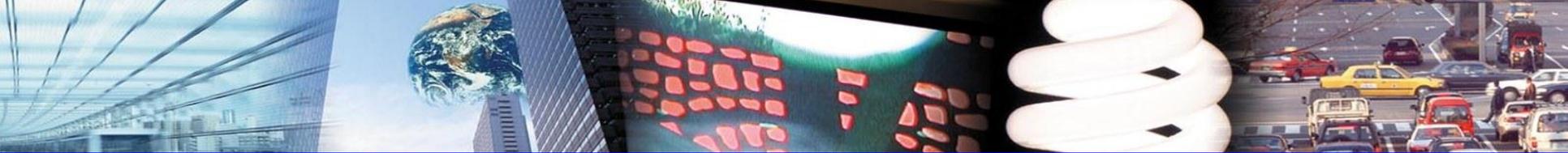
2. History of CEEDS





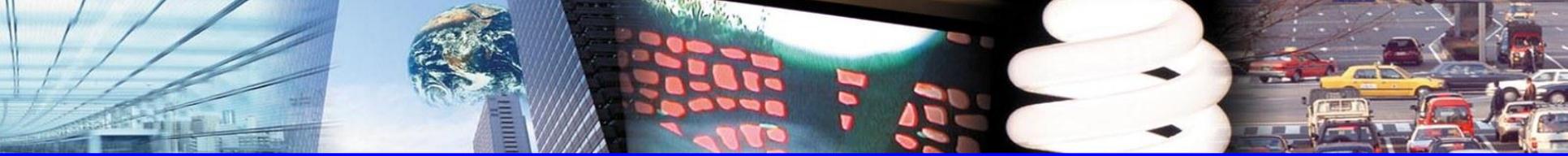
2. History of CEEDS

- **Phase 1: Appliance Energy Efficiency Standards and Labeling**
 - 1st Workshop: 19-21 October 2009, Taipei City, Chinese Taipei
 - 2nd Workshop: 1-2 March 2010, Tokyo, Japan
- **Phase 2: Building Energy Codes and Labeling**
 - 1st Workshop: 8-10 September 2010, Bangkok, Thailand
 - 2nd Workshop: 26-28 January 2011, Hong Kong, China
- **Phase 3: Energy Efficient Urban Passenger Transportation**
 - 1st Workshop: 14-16 September 2011, San Francisco, USA
 - 2nd Workshop: 17-19 January 2012, Singapore



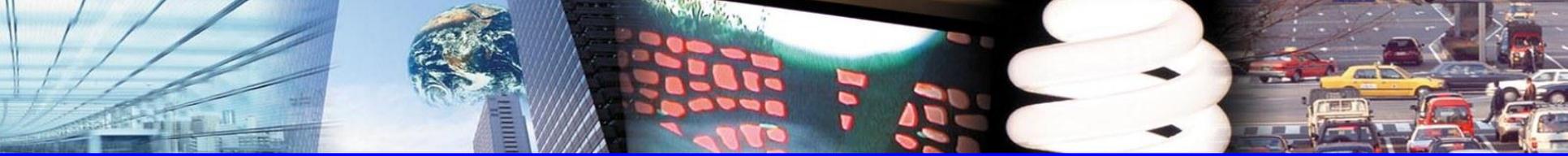
3. CEEDS Phase 4: 1st Workshop in Bangkok

- CEEDS Phase 4 deals with **“Promotion of Energy Service Company (ESCO)”**.
- Jyukankyo Research Institute Inc. of Japan was hired as a consultant.
- **The first workshop** of CEEDS Phase 4 was hosted by **Thailand** on **21-23 January 2013** in Bangkok.
- 4 participating eligible economies: **Chile, China, Malaysia**, and **Thailand** attended and made presentations. **The Philippines**, which could not send delegates, submitted the presentation material.
- Speakers were invited from **Canada, China, Chinese Taipei, Thailand** and **USA**. Representatives from **Chinese Taipei** and **Thailand** also attended.



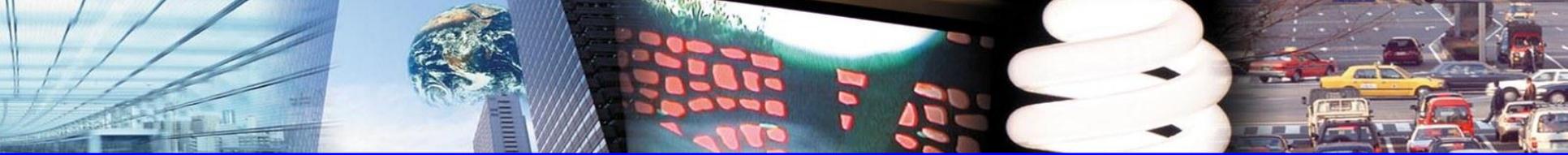
3. CEEDS Phase 4: 1st Workshop in Bangkok

- Prominent experts on ESCO issues were invited.
- At the first Bangkok Workshop :
 - Dr Prasert Sinsukparsert, Director of Planning Division, Department of Alternative Energy Development, Ministry of Energy, Thailand
 - Mr. Thomas K. Dreessen, Chairman and CEO, EPS Capital Corp. USA
 - Mr. Teng-Yaw Yu, Chairman of the Taiwan Association of Energy Service Companies (TAESCO) and CEO of the Taiwan Green Productivity Foundation, Chinese Taipei
 - Mr. Pierre Baillargeon, Vice President, Econoler, Canada
 - Ms. Ming Zhao, Vice Director/Secretary General , EMCA , China
 - Mr. Mek Meksarikul, Vice President, Head of Corporate Credit Solution Management, Corporate Credit Product Management Department, Kasikorn Bank, Thailand
 - Mr. Sarat Prakobchart, Senior Engineer, Department of Alternative Energy Development, Ministry of Energy, Thailand
 - Dr. Watcharee Jornjumrus, Technical Advisor, Energy for Environment Foundation, Thailand
 - Dr. Chiharu Murakoshi, Jyukankyo Research Institute, Japan



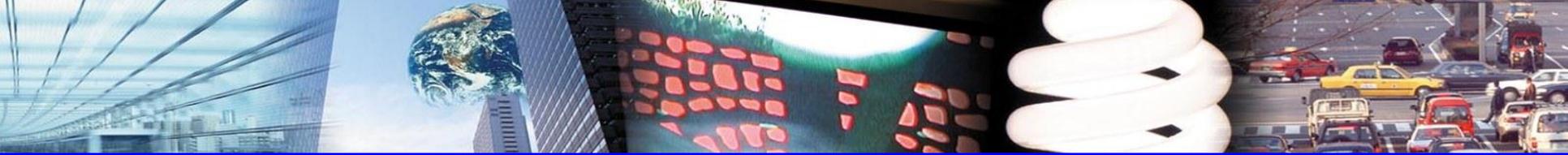
3. CEEDS Phase 4: 1st Workshop in Bangkok

- **Findings at 1st Workshop**
 - Economies and agencies invited to the 1st Workshop presented the current status of the ESCO industry in each of their respective economies.
 - The ESCO industry in various economies were in different development stages.
 - **Thailand** and **China** were making great strides in developing and promoting their ESCO industry and were thus classed as in a more advanced stage of development.
 - The ESCO industry in **the Philippines, Chile** and **Malaysia** were seen to be in an infancy stage, whilst interest was strong for development, promotion policies seem to still be at a discussion and preliminary stage.



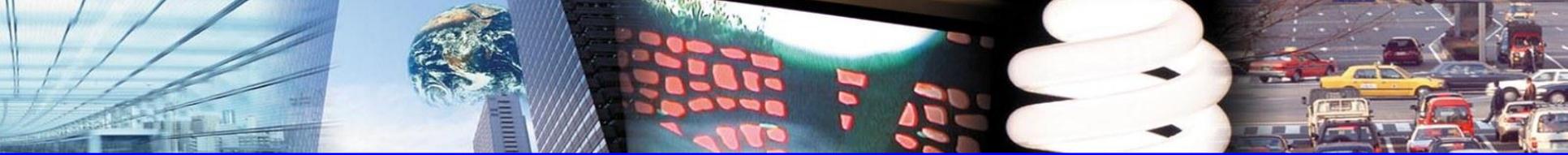
4. CEEDS Phase 4: 2nd Workshop in Taipei

- **The second workshop** for CEEDS Phase 4 was hosted by **Chinese Taipei** on **March 26-28** in Taipei.
- The 2 economies, **Malaysia** and **Thailand**, participated again (**Chile, China** and **the Philippines** were absent).
- Speakers were invited from **Canada, Chinese Taipei, Japan,** and **European Commission (EC)**. Representatives from **Chinese Taipei** and **Thailand** also attended.



4. CEEDS Phase 4: 2nd Workshop in Taipei

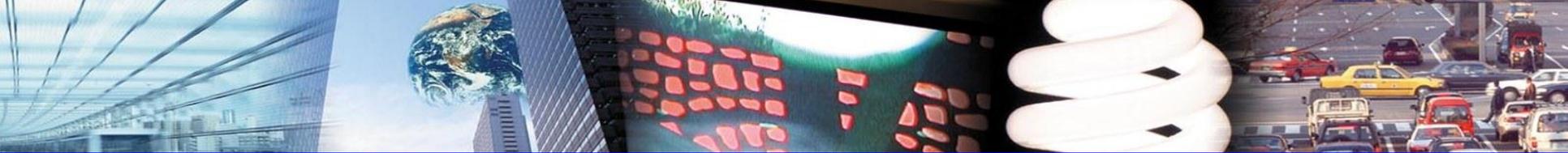
- At the second Taipei Workshop :
 - Dr. Hidetoshi Nakagami, Jyukankyo Research Institute, Japan
 - Dr. Nicola Labanca, Senior Researcher, EC Joint Research Center
 - Mr. Kentaro Horisaka, Manager, Overseas Business Development, Energy Advance, Japan
 - Mr. Pierre Baillargeon, Vice President, Econoler, Canada
 - Mr. Teng-Yaw Yu, Chairman, TAESCO, Chinese Taipei
 - Mr. Takuya Yamamoto, Auditor, JAESCO, Japan
 - Dr. Chiharu Murakoshi, Jyukankyo Research Institute, Japan
- Nevertheless, while Chile, China, Malaysia and Thailand sent the delegates to the first Workshop, only Malaysia and Thailand sent the delegates to the more important second Workshop.



4. CEEDS Phase 4: 2nd Workshop in Taipei

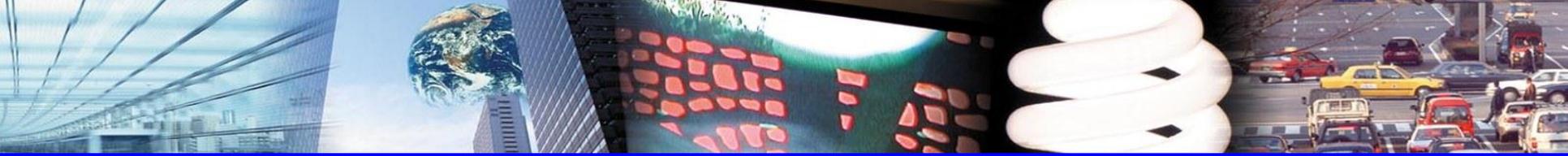
- **Findings at 2nd Workshop**

- The ESCO industry is growing rapidly in economies with attractive commercial potential in energy efficiency.
- Energy prices and industry barriers are key uncertainties to the ESCO market potential.
- The focus of the 2nd workshop was to provide detailed plans on how to support the development of the ESCO industry and also to provide a strategic appraisal of best practices and policies.
- Specific areas discussed during the expert review included measurement and verification, market framework and capacity building, financing and contract negotiation and finally policy support.



4. CEEDS Phase 4: 2nd Workshop in Taipei

- **Findings at 2nd Workshop (Continued)**
 - Following on from the 1st workshop in Bangkok, Malaysia and Thailand presented their refined proposal on the next steps to developing their ESCO industry.
 - **Malaysia** is in the process of establishing an ESCO industry but faces the immediate barrier of subsidized natural gas prices.
 - However, it is expected that natural gas subsidies will be slowly removed in the near future with surging consumption and diminishing production.
 - While Malaysia has established a framework and received a directive to establish a viable ESCO market, there is little scope for direct government support in the form of subsidies or low interest financing.
 - Therefore, much focus was placed on developing a market framework and on capacity building of the industry.

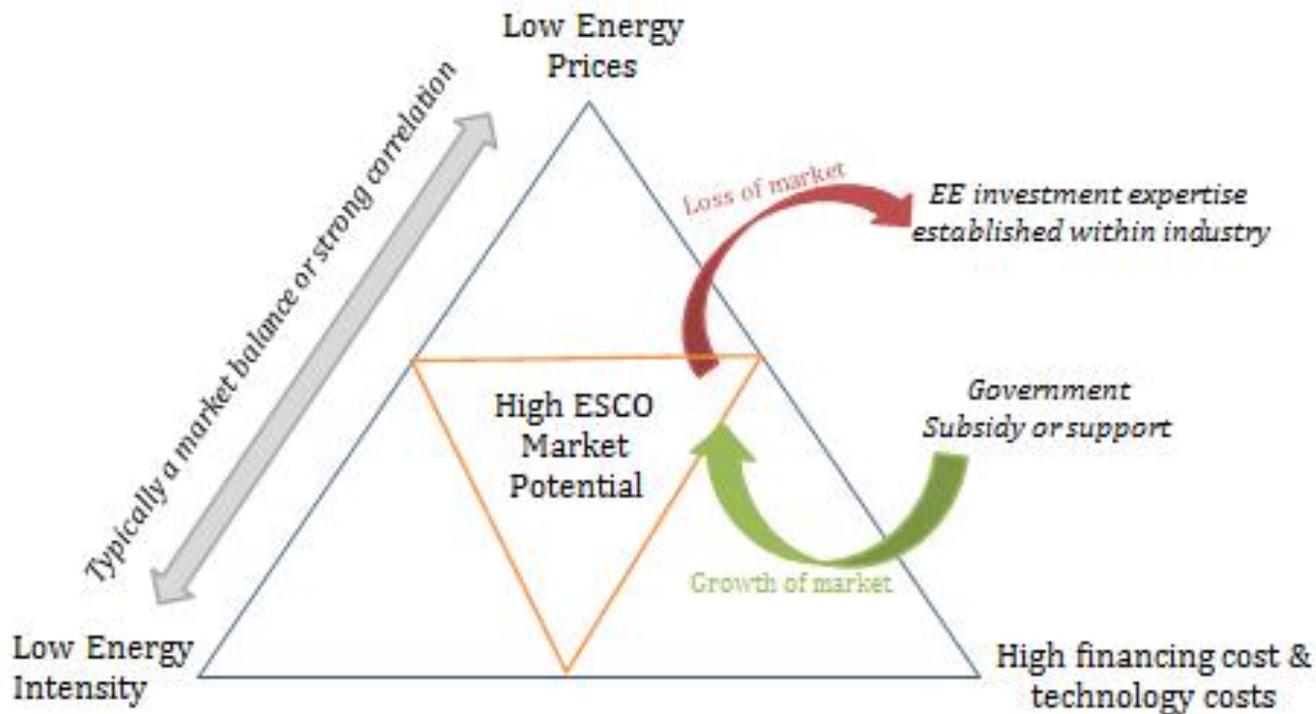


4. CEEDS Phase 4: 2nd Workshop in Taipei

- **Findings at 2nd Workshop (Continued)**
 - In the case of **Thailand**, the ESCO market is well established with a large market already in operation.
 - The next step for Thailand is to further develop and refine policies which support the market stability and sustainability by continuing to improve technical capability and industry participation.
 - This includes strengthening policy support measures such as through government pilot projects.

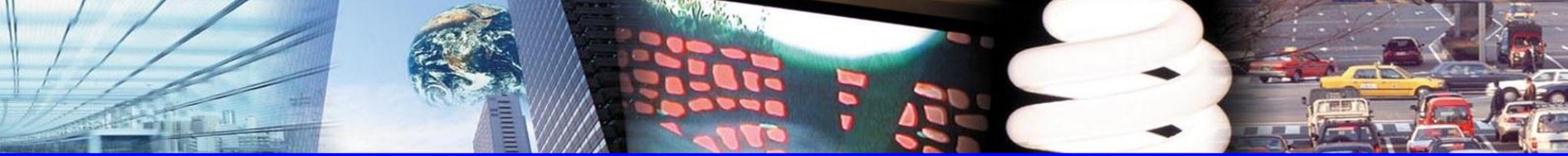
4. CEEDS Phase 4: 2nd Workshop in Taipei

ESCO Market Potential Balances



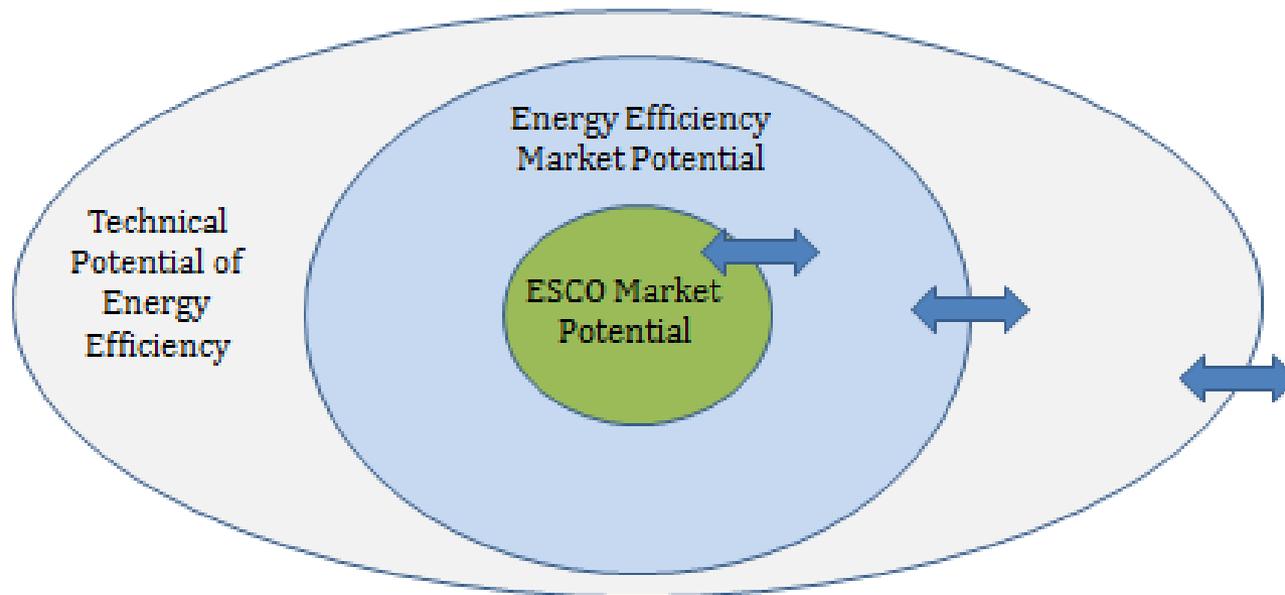
Source: APERC Analysis (2013)

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4. CEEDS Phase 4: 2nd Workshop in Taipei

ESCO's a Small but Essential Piece of the Eye-Ball

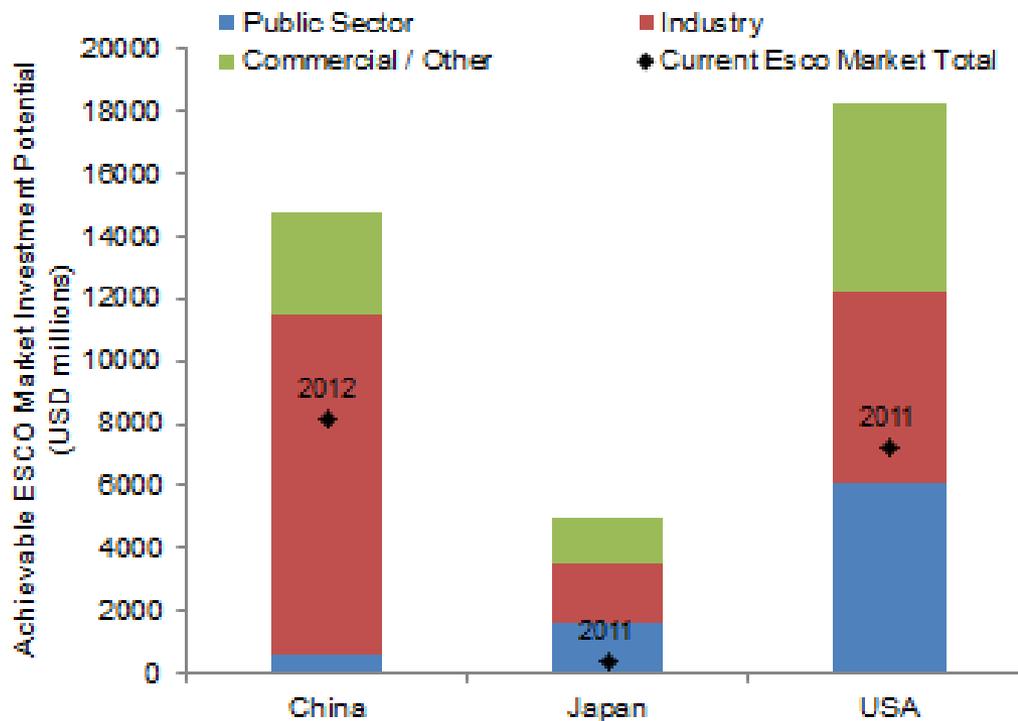


Source: APERC Analysis (2013)

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4. CEEDS Phase 4: 2nd Workshop in Taipei

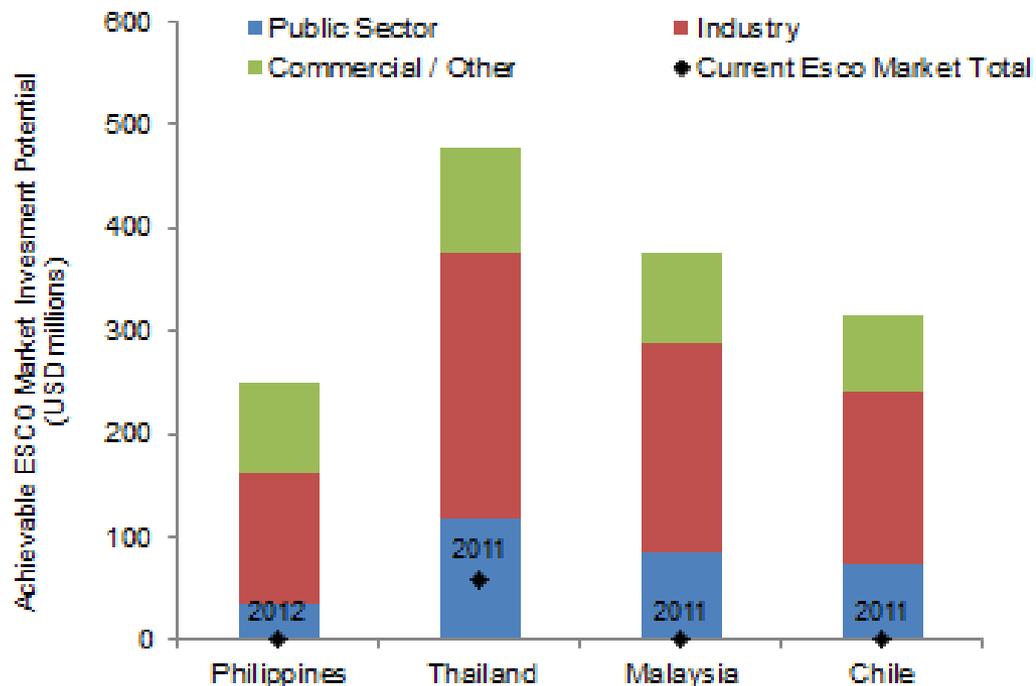
ESCO Market Potential Today



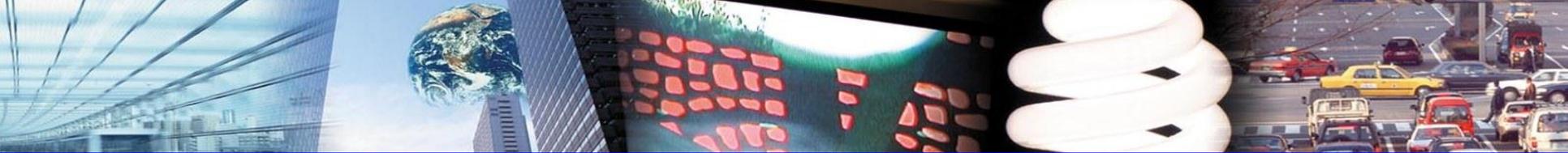
Source: APERC Analysis (2013)

4. CEEDS Phase 4: 2nd Workshop in Taipei

ESCO Market Potential Today



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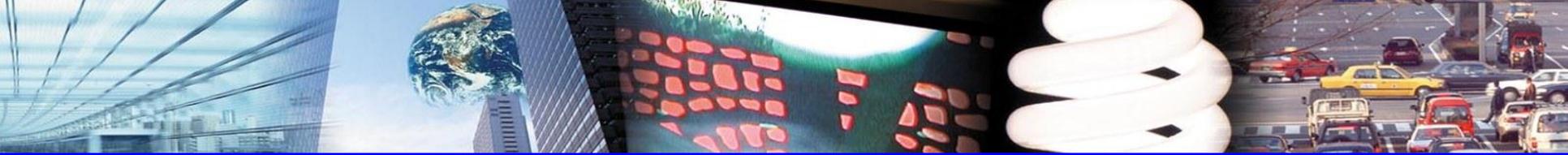
5. Future Shape of CEEDS

- **CEEDS is a very complicated project which is arranged into two workshops in two different economies, with the same participating delegates and expert speakers for both workshops.**
- **Given the resource constraints of APERC, it is necessary to simplify the scope of the project.**

Two workshops only for the **several** participating economies, inviting **several** experts **twice**



One workshop open to the **all** APEC economies, inviting **fewer** experts **at once**



5. Future Shape of CEEDS

- The topics of the workshop will be selected from the key issues of the previous PREEs. Future workshop will be **integrated into PREE (i.e. no longer an independent project)** and be renamed as, for example, an “Energy Efficiency (EE) Policy Workshop”.
- The PREE Policy Workshop may be held in conjunction with **one of the two bi-annual meetings of EGEE&C** (Expert Group of Energy Efficiency and Conservation).
- The Policy Workshop will be **a half day** event led and chaired by an APERC researcher.



Thank you for your kind attention

<http://aperc.ieej.or.jp>