



**38th NEW AND RENEWABLE ENERGY TECHNOLOGIES
EXPERT GROUP (EGNRET) MEETING**

Progress on APEC Peer Review on Low- Carbon Energy Supply (PRLCE)

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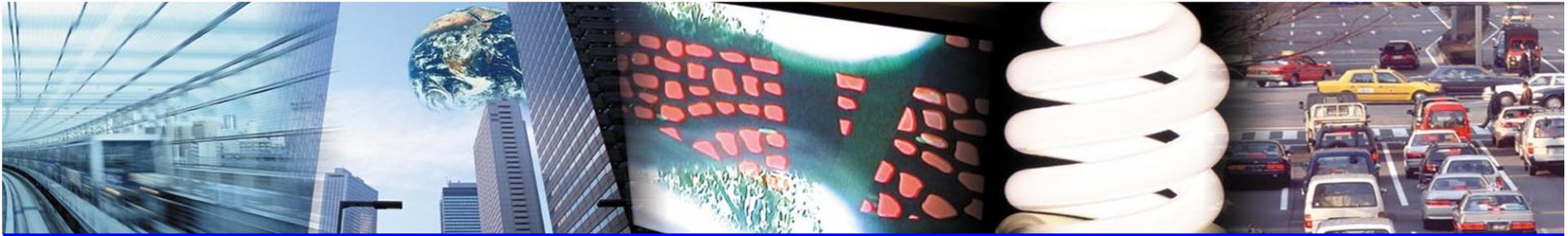
Asia-Pacific
Economic Cooperation

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APEC Peer Review Mechanisms

APEC Energy Ministers' 2007 Darwin Declaration:

“We directed the APEC Energy Working Group (EWG) to develop a *Voluntary Energy Peer Review Mechanism*, with an initial focus on progress toward attaining **energy efficiency goals**”

APEC Leaders' 2007 Sydney Declaration:

“We agreed on the two specific initiatives: 1) **to facilitate and review progress through *voluntary APEC Energy Peer Review Mechanism*, with a report back to APEC Leaders**; and 2) to work towards achieving an APEC-wide goal of a reduction in energy intensity of at least 25 percent by 2030 (with 2005 as the base year)”

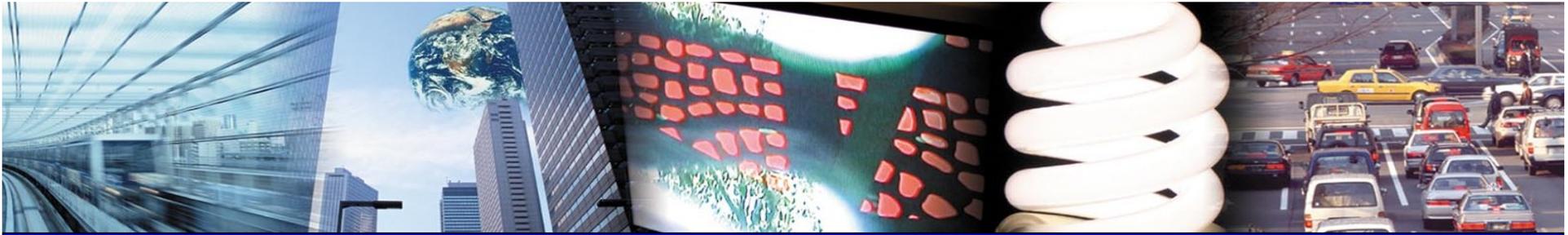


Peer Review Mechanisms for Low-Carbon Energy Supply (PRLCE)

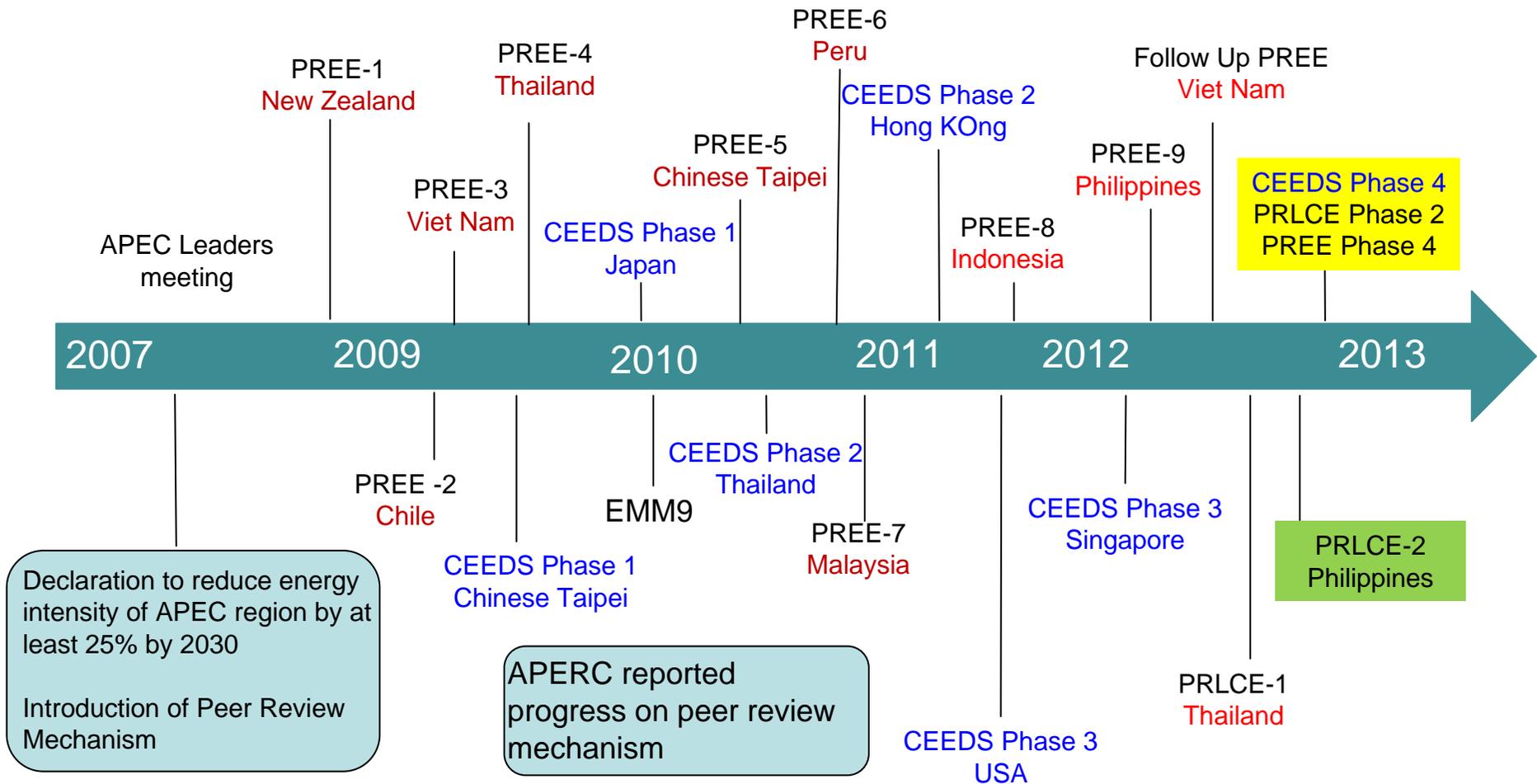
APEC Energy Ministers' 2010 Fukui Declaration:

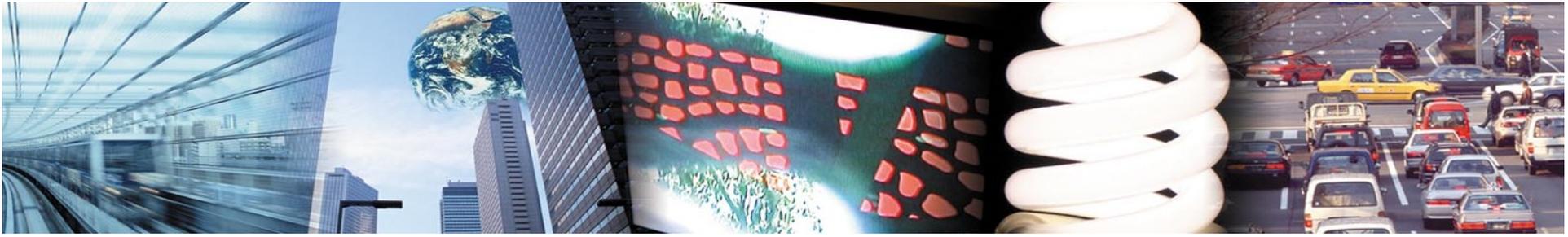
“We commend the **Peer Review on Energy Efficiency (PREE)** which has been successfully carried out for four APEC economies and urge additional economies to participate”.

“We instruct the EWG to explore *mechanisms* to encourage economies to set **individual goals** and **action plans** for introducing *low-emission power sources* - renewable, nuclear and fossil fuels with carbon capture and storage (CCS) - to make our energy supply cleaner. We will create *low-carbon communities* in the region”.



Summary of PRLCE, PREE & CEEDS





- Declaration of APEC Leaders on Peer Review
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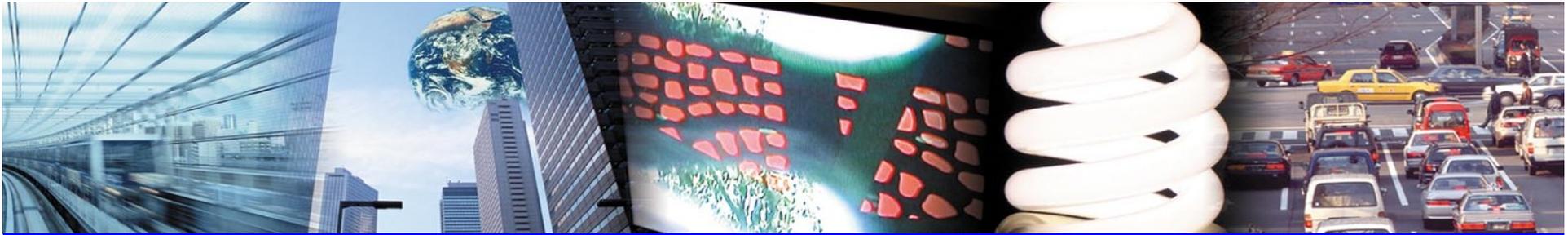
Purpose and Main Objectives of PRLCE

Purpose:

To assist volunteer APEC economy to promote **low-emission power sources** by providing recommendations from APEC peer review experts.

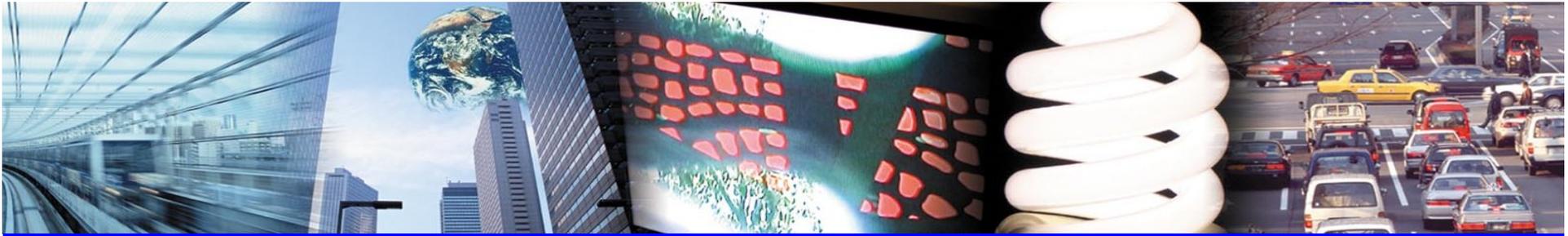
Main Objectives:

- Share experiences and knowledge on best practices for efficient and effective policies to promote **low carbon power supplies** (such as renewable energy) in developing APEC economies, and how to adapt policies and measures which have been successful elsewhere to the unique conditions of each economy;
- Encourage developing APEC economies to **set individual goals** on power supply from low carbon sources (such as renewable energy), and to formulate action plans to achieve the goals;



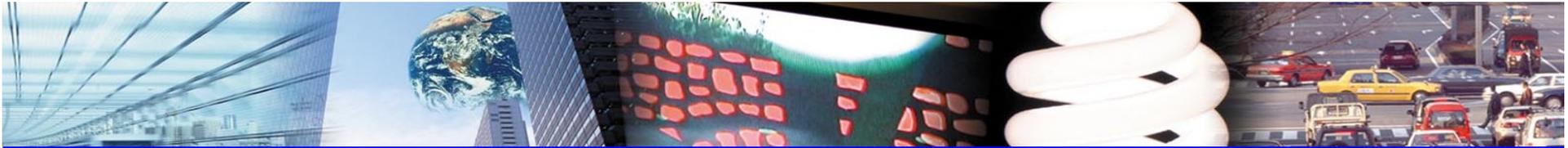
Principles of PRLCE

- Recognize and be responsive to the context for Low-Carbon Energy Supply in the host economy;
- Review the host economy's Low-Carbon Energy Supply policy framework;
- Review strategic Low-Carbon Energy Supply programs;
- Review the effectiveness of delivery activity strategy;
- Review the analytical processes used to evaluate options and monitor progress; and
- Highlight and acknowledge progress
- Highlight areas for development and make practical suggestions;
- ***Seek to identify effective policies, best practices and high performance programs e.g. for RE promotion in volunteer economy.***



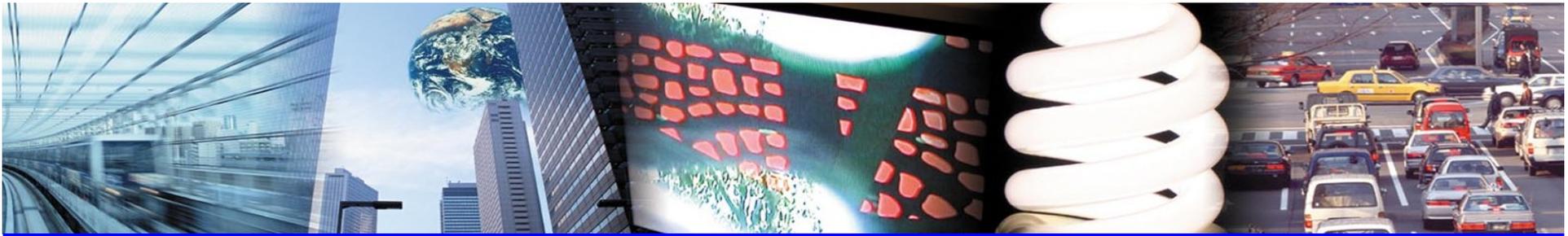
Process of PRLCE

Stage	Activity	Responsibility
1	EWG endorses the host economy volunteering for Peer Review	EWG
2	Economy prepares for and submits to APERC pre-briefing information within one month	Economy
3	APERC PRLCE Manager and economy representative plan Peer Review using Peer Review guidelines	Economy and APERC
4	Peer Review team proposed and contacted	Economy and APERC
5	Peer Review team confirmed	Economy and APERC
6	Economy plans visit in discussion with APERC	Economy and APERC
7	Economy and APERC confirm review team and visit program. APERC with Review team may submit specific questions / data requirement to host economies. APERC request for briefing information	Economy and APERC Review Team
8	Economy provides the answers for the specific questions and information to review team	Economy
9	Review visit to economy	Review Team, Economy and APERC
10	Draft Review Report finalized	Review Team and Economy
11	Final draft report signed off by economy	Economy
12	Economy provides Draft Peer Review Report to EWG	Economy
13	Economy and EWG Secretariat tables the final draft review report at EWG for its discussion and approval	Economy and EWG Secretariat



Value for Host Economy & APEC

- Share experiences and knowledge on best practices for efficient and effective policies to promote low carbon power supplies (such as renewable energy), including how to adapt policies and measures/technologies which have been successful elsewhere to the unique conditions of each economy.
- Gain valuable recommendations on how to improve low carbon energy policies for host economy.
- Encourage developing APEC economies to set individual goals on power supply from low carbon energy resources and to formulate action plans to support the sustainability of APEC Region.
- Contribute to the increasing of power production by low carbon energy and reduction of CO₂ emissions in APEC Region.



Main Roles and Responsibilities of Stakeholders

Host Economy

- Plan review process
- Prepare Documents for Review
- Arrange logistic needs
- Assess the preliminary and the draft final report

Review Team

- Conduct the review
- Present findings and recommendations in the preliminary report
- Prepare the draft final report

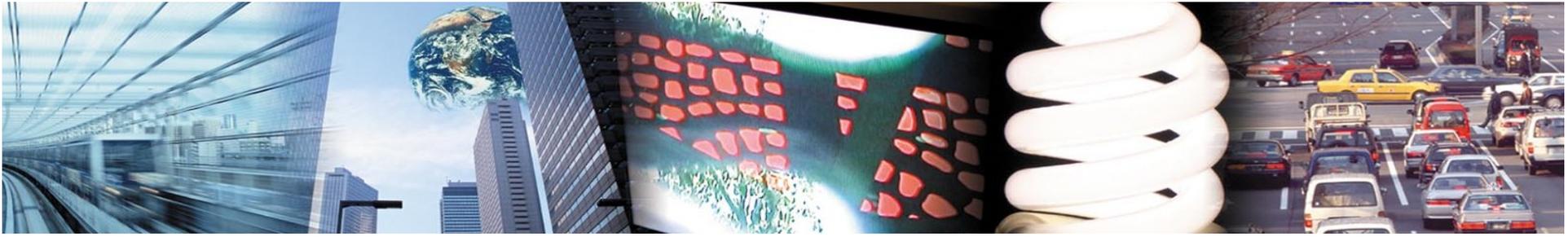
EWG

- Discuss and Endorse the draft final report
- Report to APEC Senior Officials

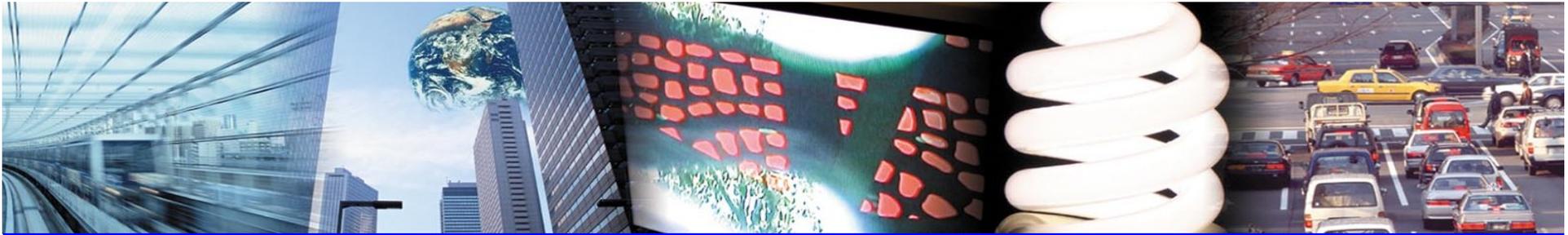
APERC

- Coordinate the review team formation with the host economy
- Coordinate the draft final report preparation with Host Economy
- Prepare the guidelines for PRLCE

cf. "Guideline on APEC Peer Review on Low-Carbon Energy Supply (PRLCE)"

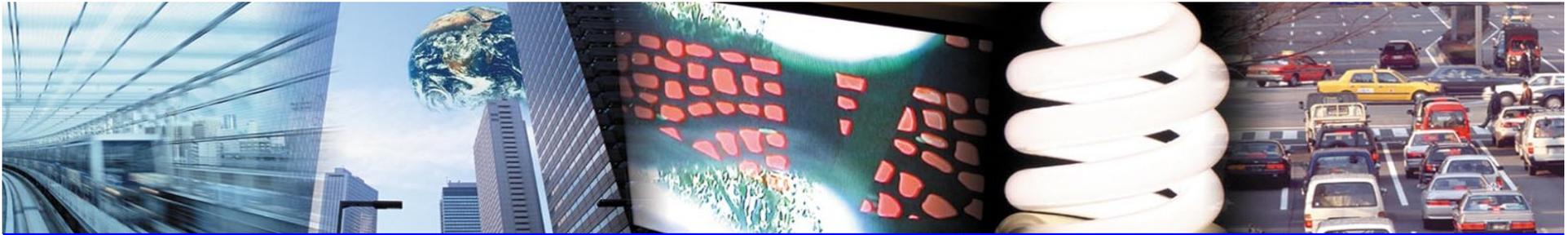


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PRLCE Work Program in Thailand

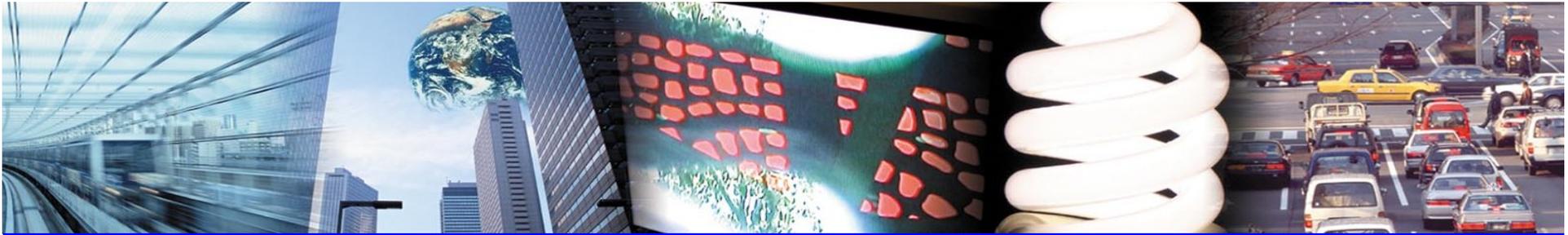
- Date: May 21 ~ 25, 2012.
- Scope of Peer Review:
 - Policy, strategy and target for renewable energy
 - Energy policy institutional arrangement (SPP/VSPP, grid, FIT)
 - Energy regulation
 - Role and activities for renewable energy promotion
 - Successful case for the promotion of renewable energy
 - Contribution by private sector
 - CDM



Summary of PRLCE in Thailand (1/3)

Major achievements

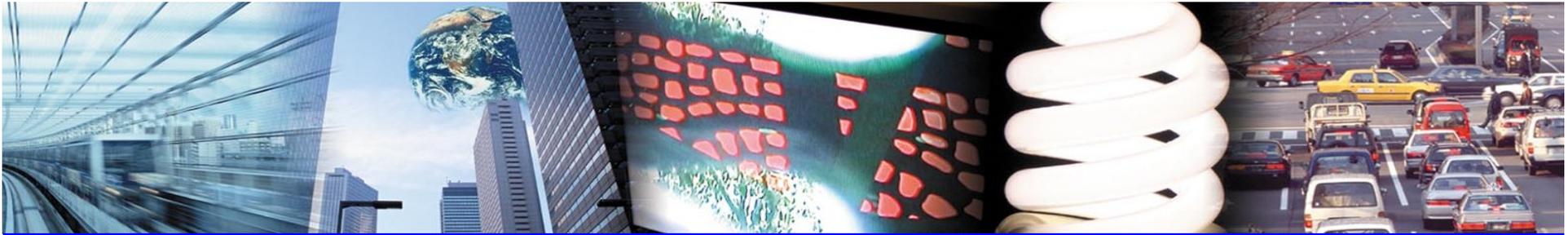
- Clear and aggressive renewable energy targets have been identified in the Alternative Energy Development Plan
- Dedicated agency for renewable promotion (DEDE) and involvement of relevant government offices
- Dedicated regulatory authority and separation from policy office – one stop shop for renewable regulation
- Established financial support – Adder, investment grant, etc. Fit to be introduced
- Government will focus on funding R&D (NSTAD) and welcome private-led investment in carrying out actual related projects



Summary of PRLCE in Thailand (2/3)

Major recommendations (total 49 recommendations proposed)

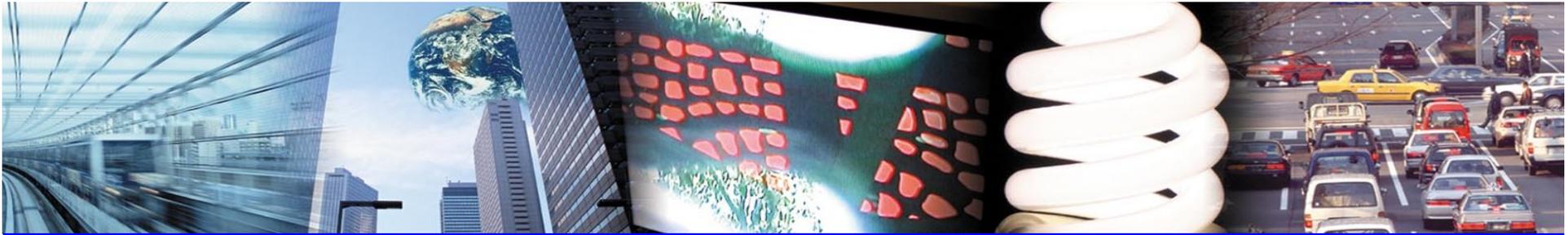
- To stipulate the frequency of revision or updating Power Development Plan in the law
- Better co-ordination of plans across different agencies, this would be beneficial at the implementation stage as well, especially for smart grids
- It is also important to foster domestic renewable energy related industries
- Support the development of a renewable energy business association
- Consider extending financial support for small scale renewable energy developments-more attractive incentives than the original revolving fund



Summary of PRLCE in Thailand (3/3)

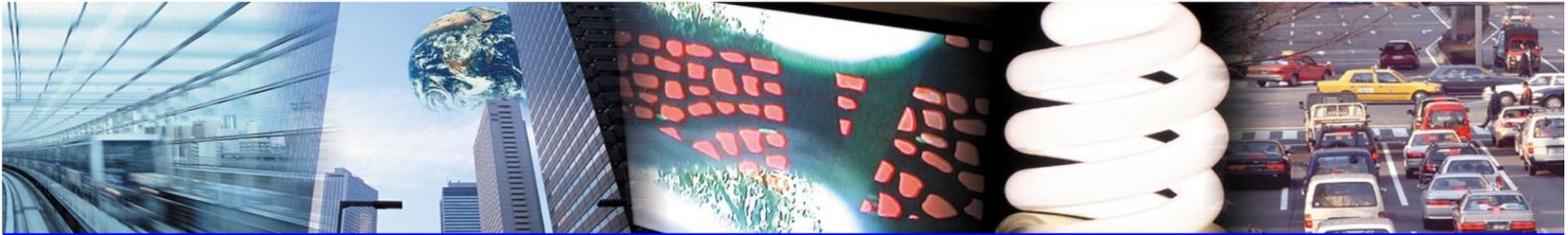
Major recommendations (total 49 recommendations proposed)

- Harmonize standards and codes internationally
- It is desirable to set up a framework for introducing foreign investment to promote renewable energy(e.g. incentive). Criteria for evaluating the positive effects of foreign investment should be considered
- Expedite the Smart Grid / Low Carbon City activities (work with APEC)
- Establishing the complete waste recycling system, and large scale incineration system (instead of landfill) is recommended to increase the capacity of waste-to-energy rapidly.
- Encourage international cooperation for further study and R&D on different pioneer renewable energy technology



Opening Session



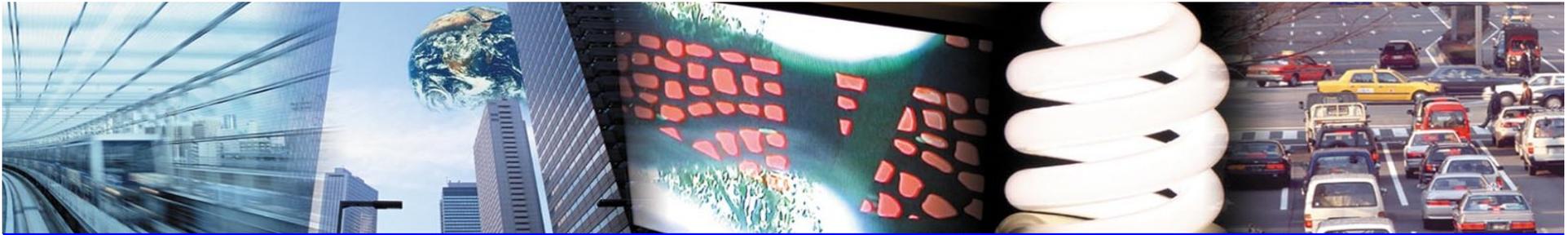


Site Visiting



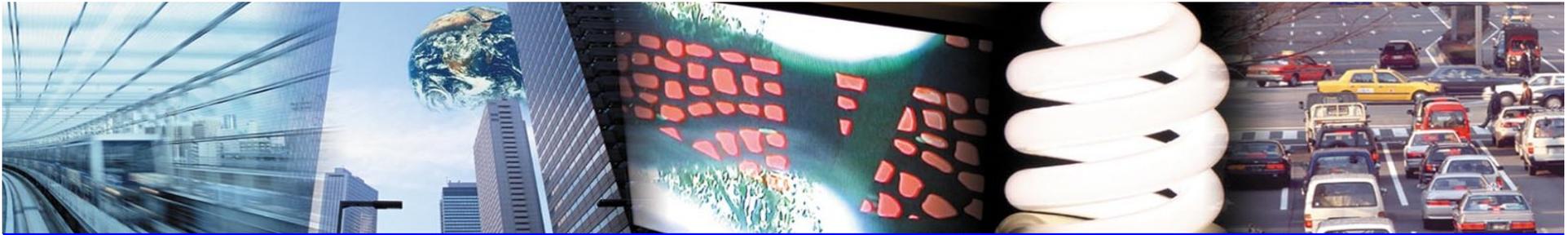
84 MW SOLAR ENERGY

- Lopburi Solar Project (73MW)
- Wang Phloeng Solar Project (11MW)
- One of the world largest Thin Film Power Plants in operation
- Commercial operation since December 2011



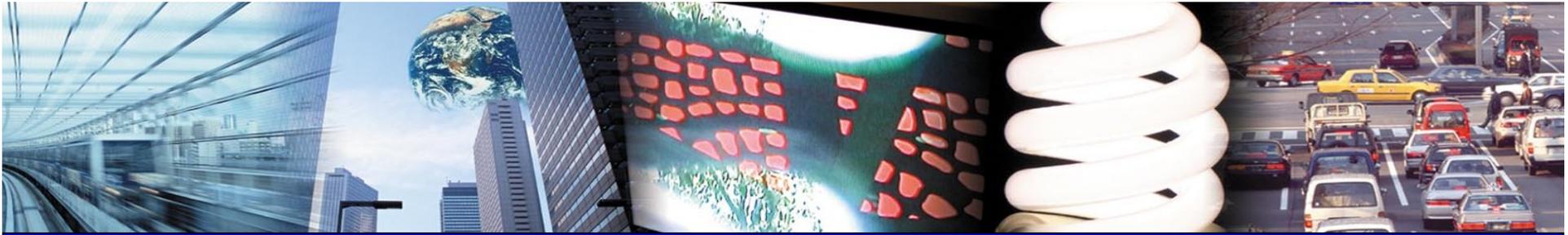
Conclusion from PRLCE in Thailand

- **GREW** -- Good Start, Right Direction, Effective Measures and Well prepared
- **More** cooperation among different stakeholders is required
- **More** resource integration can be enhanced
- **More** green energy industry is also expected
- **More** encouragement of renewable energy research



PRLCE in Philippines

- **Philippines has expressed interesting in hosting the second PRLCE**
- **The tentative date is set in the November of this year**
- **The program and field covered in this review is under consideration by Philippines**



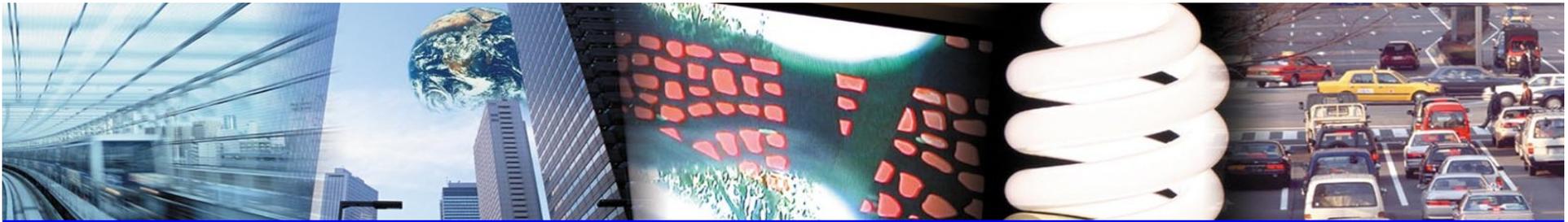
Participation Invitation

Your Economy is invited to host or join Future PRLCE to enable APEC economies to share experiences and knowledge, and learn “high–performance” strategies from their peers in terms of setting goals, formulating action plans, and improving the effectiveness of current policies in promoting LCES development, as well as providing useful recommendations for voluntary LCE implementations towards a more secure and sustainable energy future for APEC.”

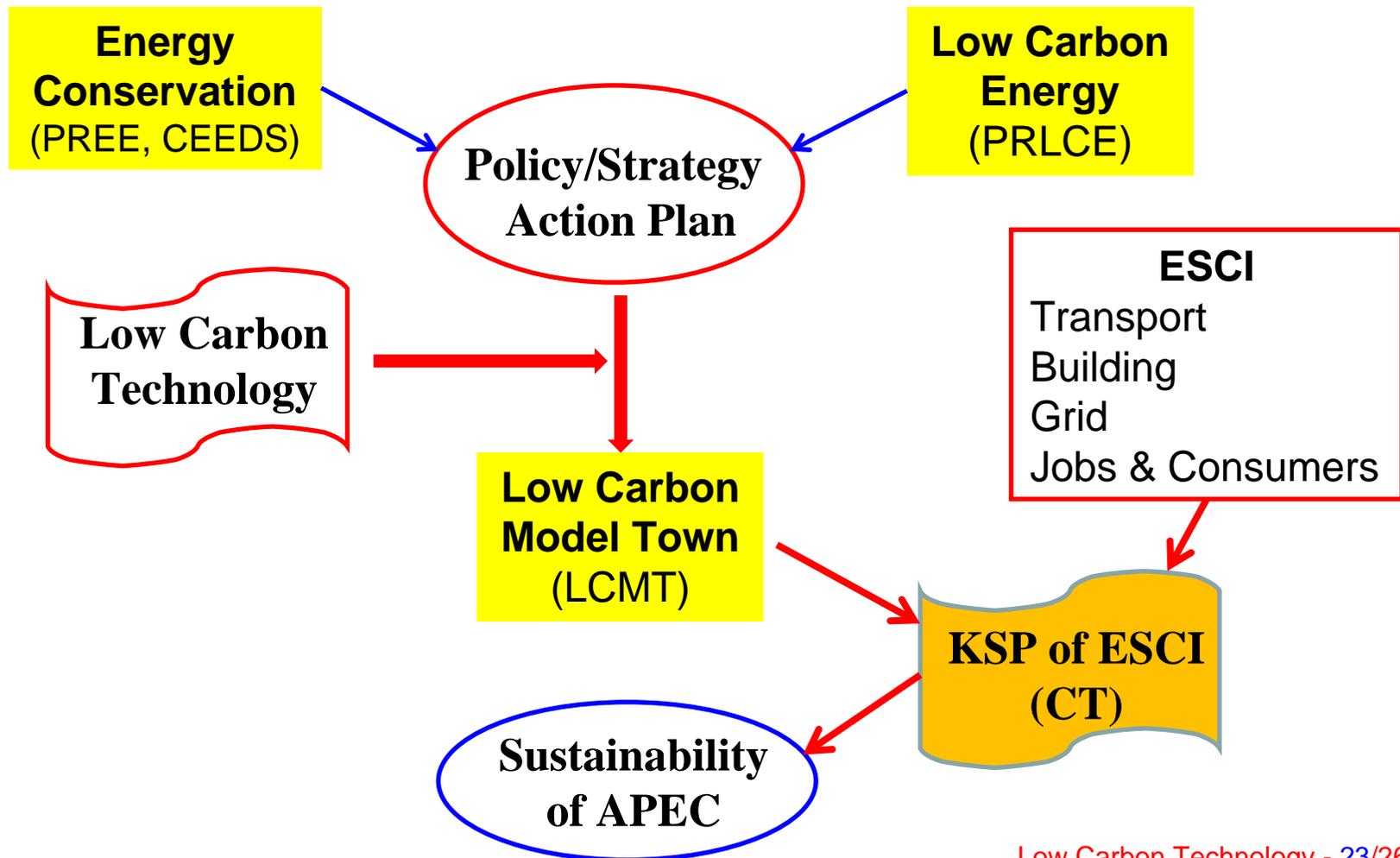
The participation by experts from member Economies and Expert Group is the important key to success.

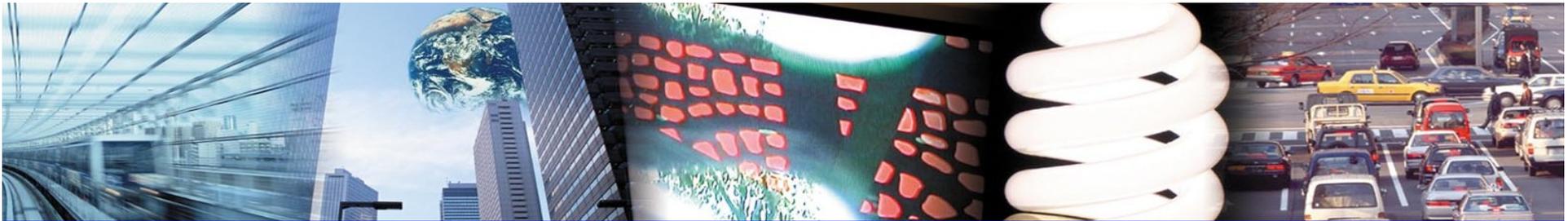


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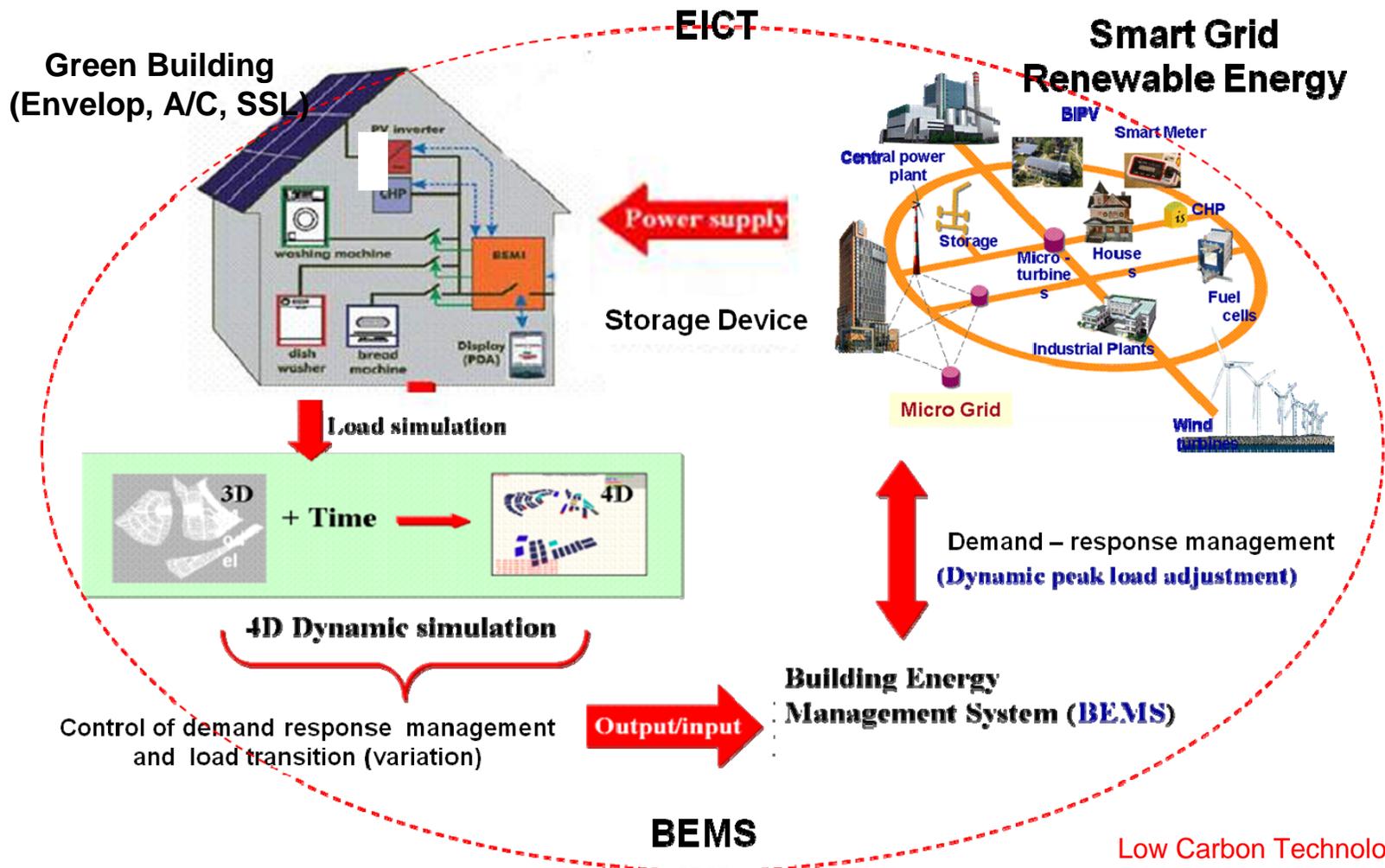


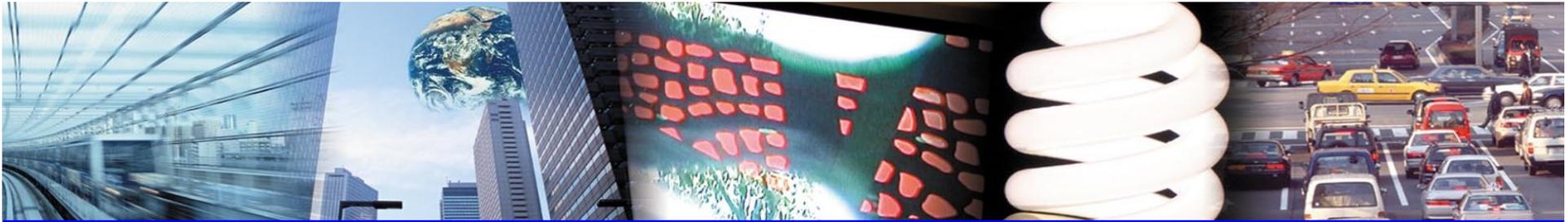
Linkage of APERC Related Projects





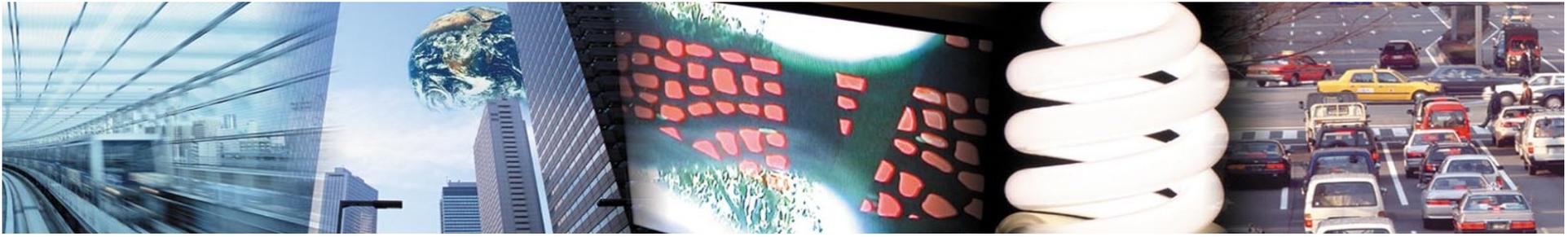
Concept of Zero Emission Building





Conclusion Remarks

- Increase in energy consumption and fast economic growth in the APEC region needs a more aggressive approach and efforts for the development and application of low carbon energy.
- Low carbon energy should consider the implementation of the system design for low carbon technology with the optimum cost effective measures in order to fulfill the sustainability development of our Earth.
- **APEREC will always bring the system integration concept to act as the coordinator to push forward the sustainability development in APEC Region with the cooperation of each country in this region and instruction of APEC Leaders.**



Thank you for your kind attention

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