



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

37th APEC New and Renewable Energy Technologies Expert Group Meeting (EGNRET)

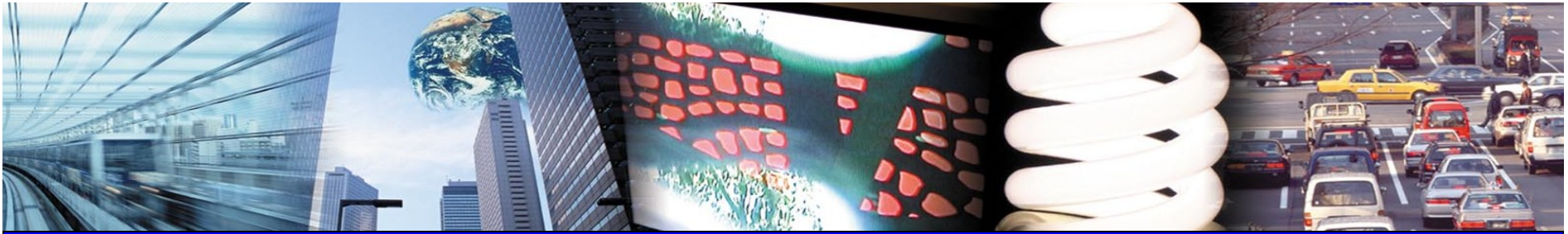
22-23 August 2011, Taipei, Chinese Taipei

Kenji Kobayashi, President

Asia-Pacific Energy Research Centre (APEREC)

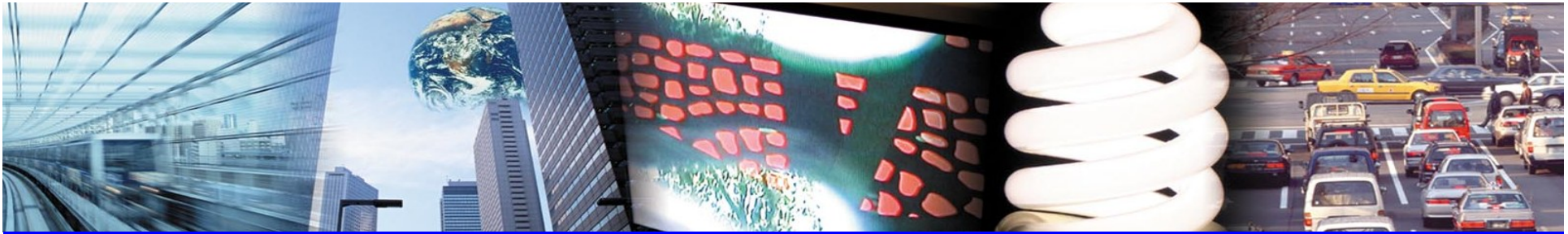


Asia-Pacific
Economic Cooperation



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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)”

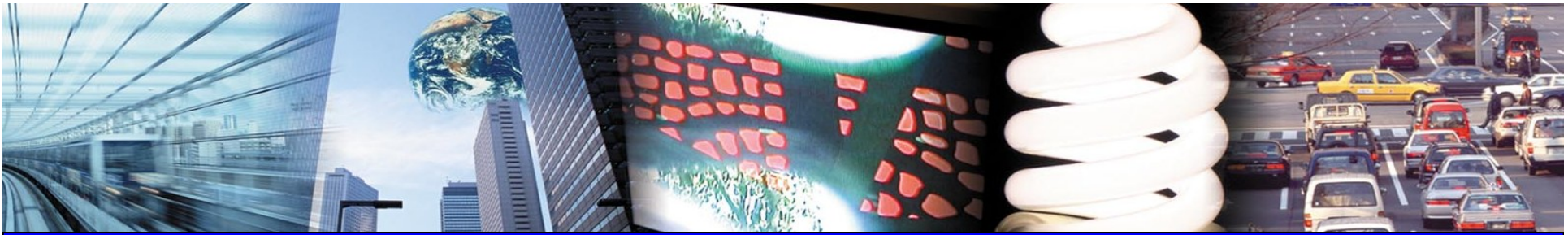


Peer Review Mechanisms for Low-Carbon Energy Supply

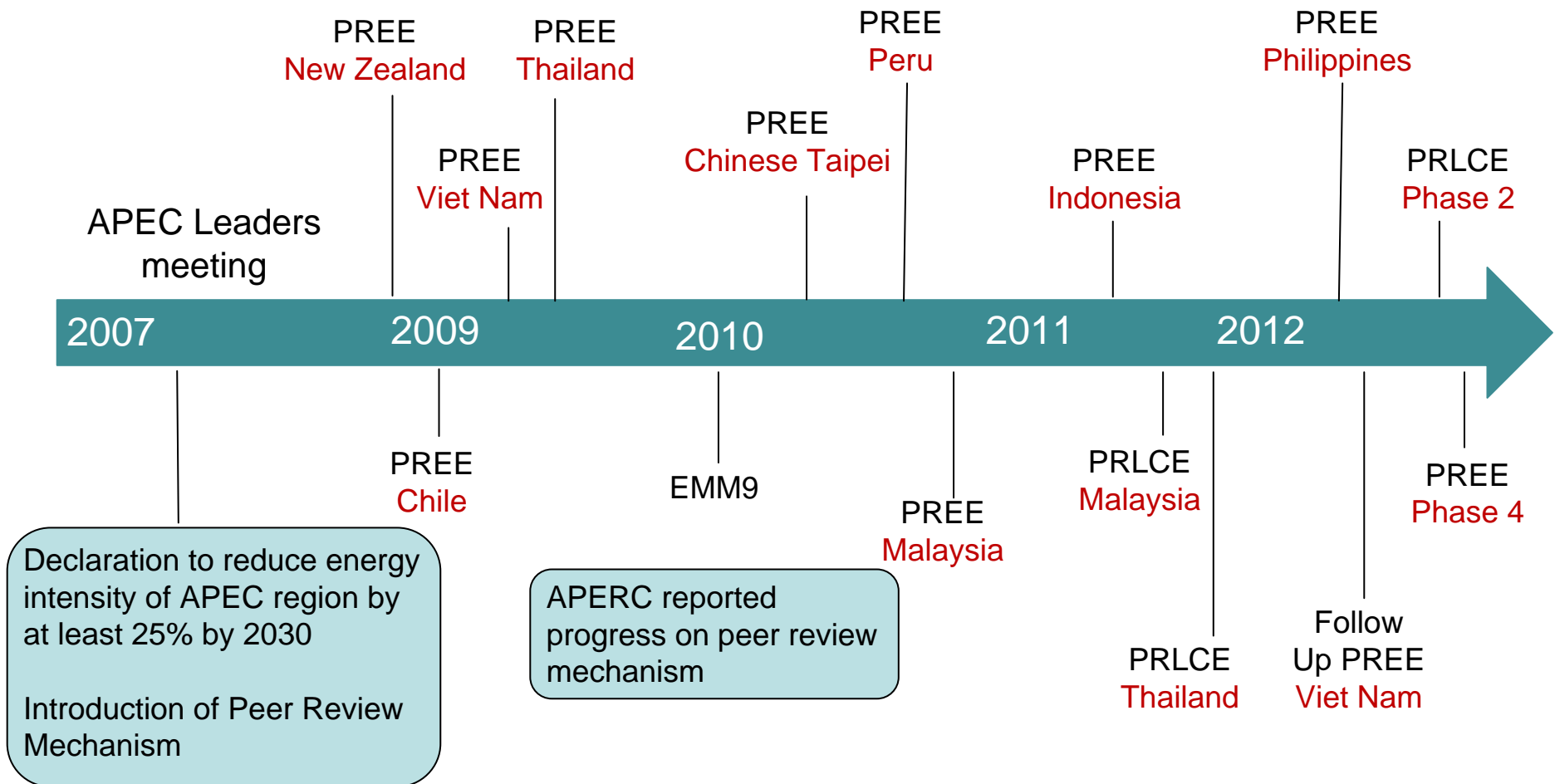
APEC Energy Ministers' 2010 Fukui Declaration:

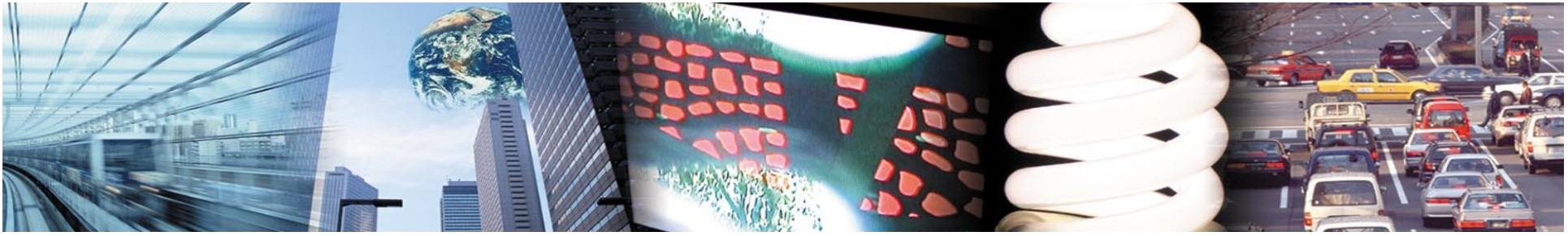
“We commend the **Peer Review on Energy Efficiency (PREE)** which has been successfully carried out for four APEC economies and urge additional economies to participate”.

“We instruct the EWG to explore *mechanisms* to encourage economies to set **individual goals** and **action plans** for introducing *low-emission power sources*- renewables, 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 and PREE





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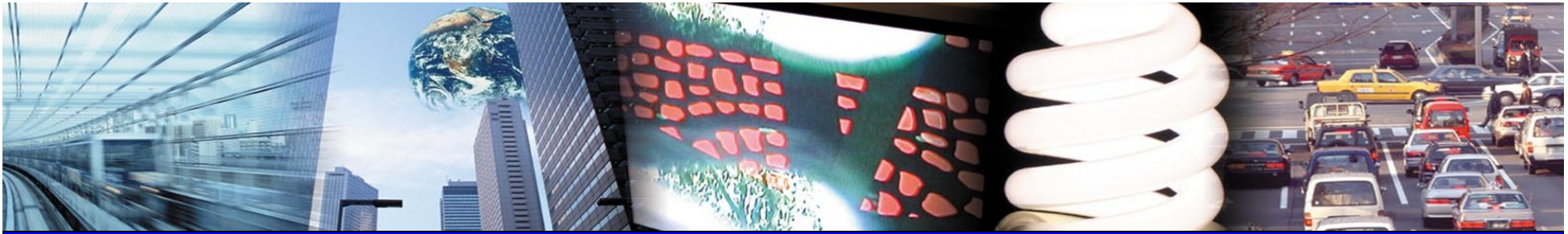
Purpose and Main Objectives

Purpose:

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

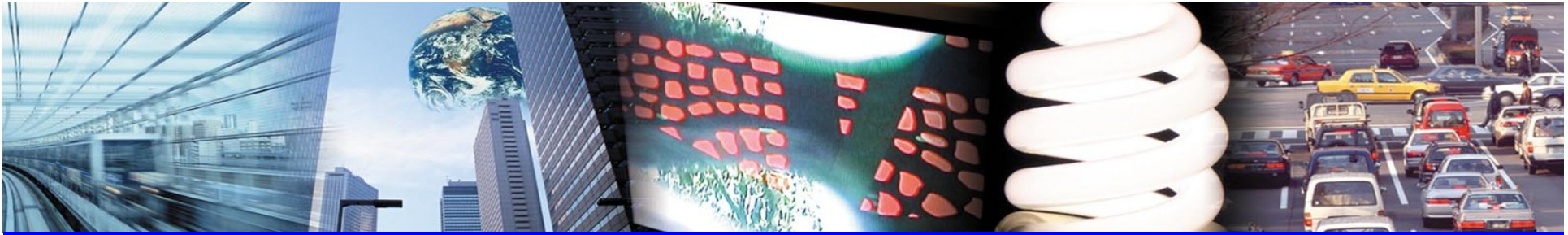
Main Objectives:

- 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;



Other Objectives..

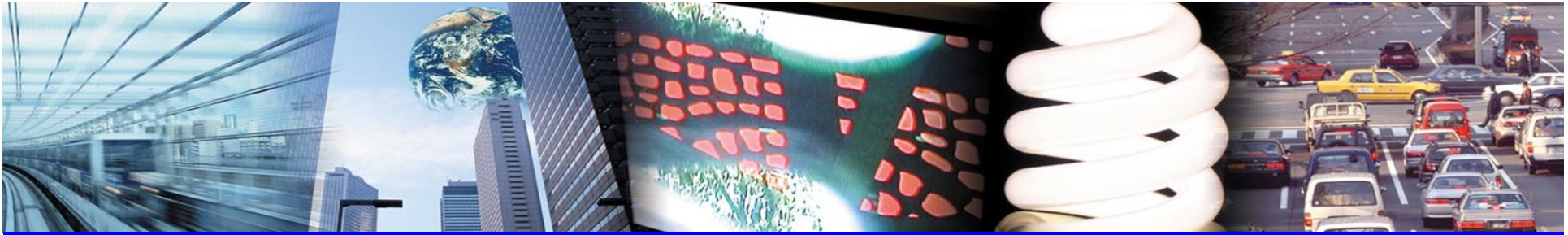
- Explore how government can create effective and efficient low-carbon/low-emission energy policies and can accelerate their implementations.
- Identify effective policies to encourage technological innovations and promote large-scale commercialization.
- Provide *recommendations* on how implementation of action plans could be improved with a view to achieving the goals and to overcome impediments in the current plan.
- Explore ways that cooperative efforts among the APEC economies could assist in achieving these objectives



Possible Scope for PRLCE

- (1) Appropriate/effective goal-setting and action plans on low-carbon, low-emission power sources e. g . renewable energy.
- (2) Appropriate policies on feed-in tariffs / RPS to promote RE.
- (3) RE financing (e.g. fiscal incentives such as tax exemptions or investment grants).
- (4) Well-designed policies/ regulatory framework to encourage entrepreneurial innovation in promoting RE.
- (5) Efficient policies to overcome non-economic barriers at various stages of RE development and deployment.
- (6) Effective RD&D policy to promote RE.
- (7) Carbon pricing policies (e.g. emission trading / carbon tax)
- (8) More comprehensive policy design to encourage low-carbon communities in APEC Low-Carbon Model Town Project.

Depend upon condition and circumstance of individual economy



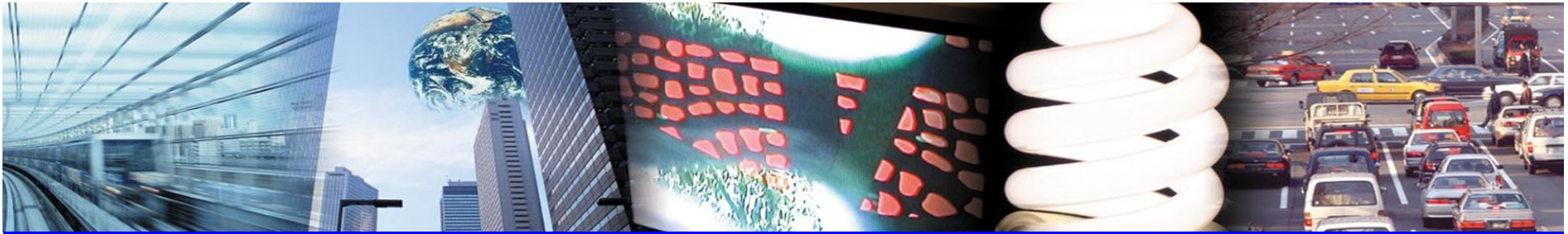
Principles of PRLCE

- 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.



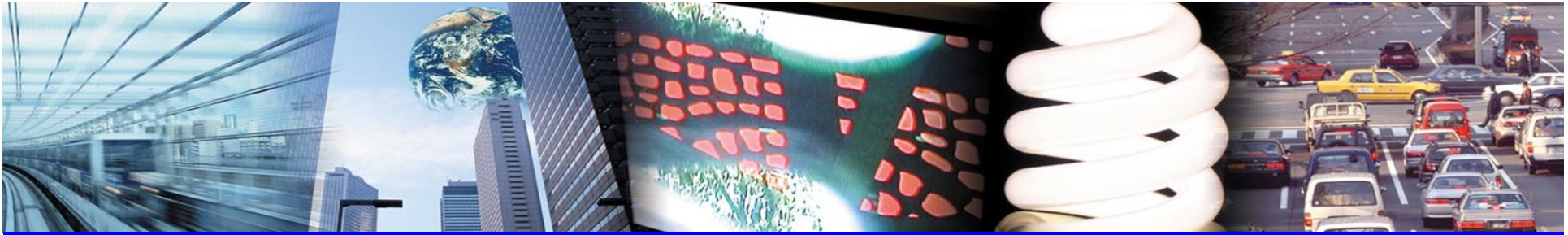
Criteria of PRLCE

- Does APEC member economy have *individual goals* on power supply from low-emission power sources? Are they measurable and verifiable?
- If measurable and verifiable individual goals on power supply from low-emission power sources have been set, is the APEC member economy envisaging reasonable efforts for exploring the potential for *future improvement* in Low-Carbon Energy Supply?
- Does APEC member economy have Low-Carbon Energy Supply action plans? If so, do they contain *concrete policies and measures* for achieving their objectives?
- Does APEC Member economy have a broader suite of ***regulatory and/or market-based responses*** (e.g., domestic emissions trading) which could encourage Low-Carbon Energy Supply improvement?
- Are the action plans being appropriately implemented and backed by ***sufficient financial and human resources***?



Criteria of PRLCE (cont.)

- Are there any *inconsistencies* among policies and measures, for example, spending a lot of government resources for improving Low-Carbon Energy Supply while subsidizing energy prices?
- What are the **roles of the government and the private sector** for pursuing Low-Carbon Energy Supply? What kind of *public-private partnership* (or cooperation) is occurring?
- Is the government monitoring the *effectiveness* of its Low-Carbon Energy Supply policies and measures?
- Is the APEC member economy on the *right track* towards achieving its own Low-Carbon Energy Supply goals?
- If not, *what options* for implementation are available that are relevant to the chosen Low-Carbon Energy Supply strategy and that reflect the *individual circumstances* of the member economy being reviewed?



Activities of PRLCE

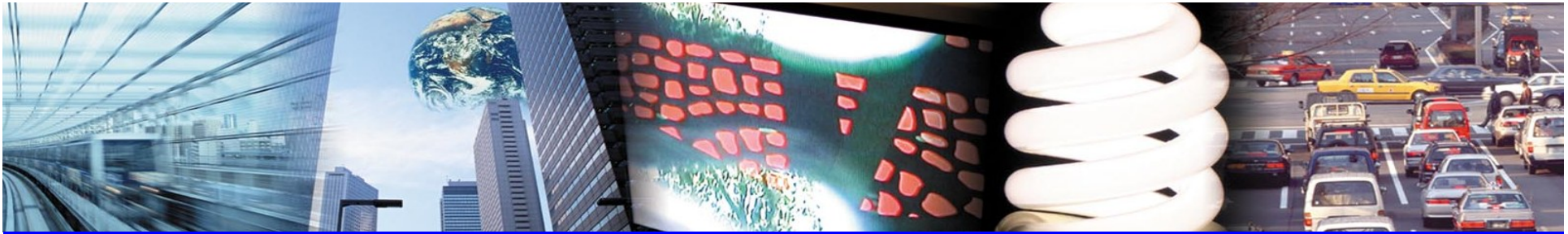
Activities

- 1) Invite APEC economy to voluntarily host the Peer Review
- 2) Define scope of review
- 3) Review team establishment – set up APEC expert team
- 4) Prepare background information on RE policies of the host economy
- 5) Review team visit
- 6) Draft review report with recommendations

Expected Outcomes

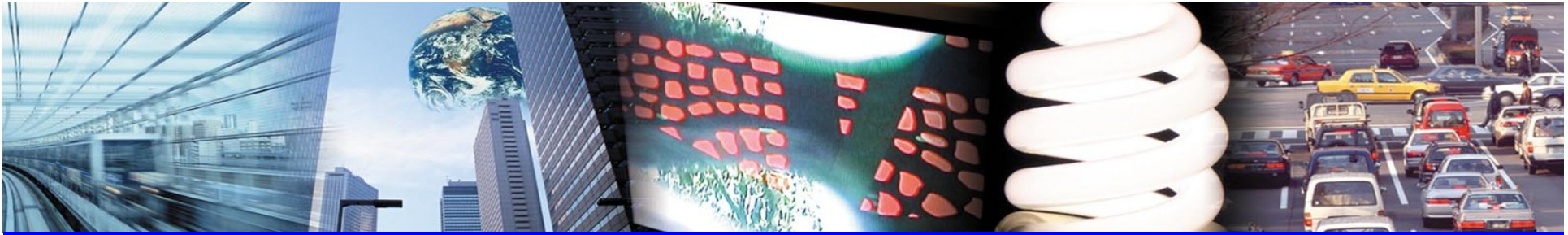
- 1) Discussion on review report and endorsement of the report with recommendations at EWG meeting
- 2) Publication
 - APERC website (<http://www.ieej.or.jp/aperc>) with link to APEC website

The participation by right experts , especially members from APEC expert groups e.g. EGNRET and EGEEC is the great key of success.



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



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

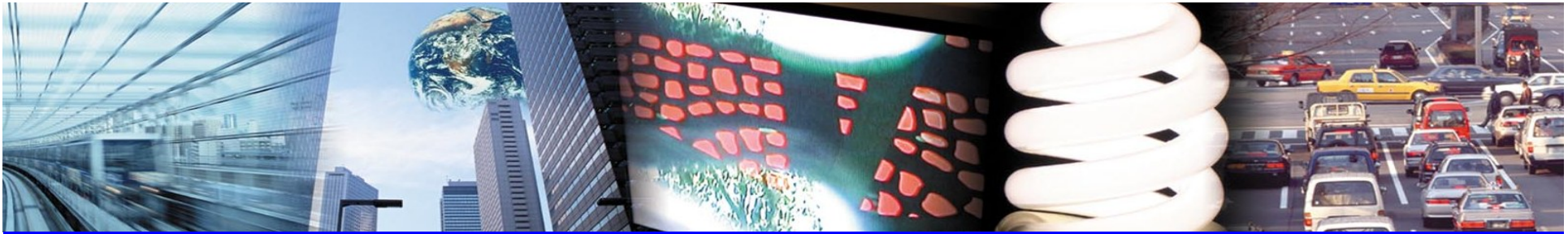
- Conduct the review
- Present findings and recommendations in the preliminary report
- Prepare the draft final report

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



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.



The First Peer Review in PRLCE Phase 1 - Malaysia

Time: Oct. 31 ~ Nov. 4, 2011

Focus: National renewable energy policy and action plan

Tentative contents for the review

- The legal framework to promote RE
- The institutional setup to promote RE
- Renewable energy resources – potential, goal, and strategy
- The renewable energy policy – policy objectives and tools
- The renewable energy action plan – implementation strategy and monitoring/evaluation



The Second Peer Review in PRLCE Phase 1 - Thailand

Time: Dec. 12-16, 2011 (Tentative)

Focus: Alternative Energy Development Plan (2008 – 2022)
on Solar, Wind, Biomass and Biogas.

Tentative contents for the review:

- RE Potential and Target; Policy, Regularity and Institutional framework.
- RE Measure: Incentives, ESCO Fund, Revolving Fund, adder cost, Investment, etc.
- Infrastructure, Legislation, Accessibility of RE Data, RE Technology Standards.
- R&D, Demonstration, Dissemination and Public Relation.
- Implementation, Monitoring & Evaluation.



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- Message from APEC Leaders & Energy Ministers

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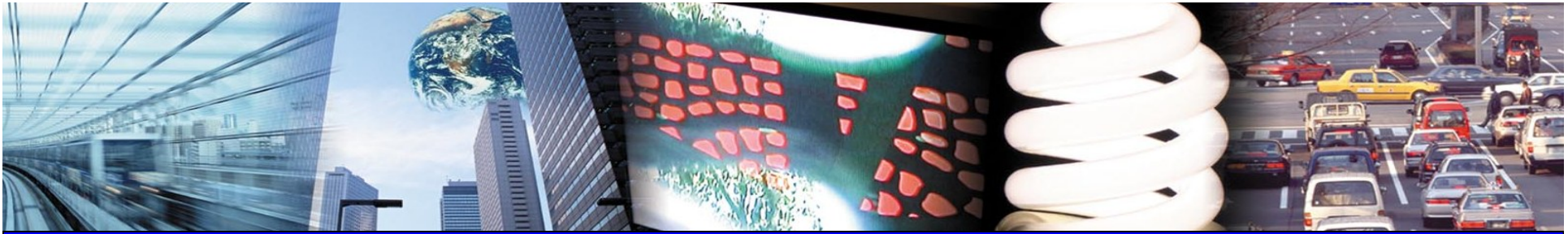
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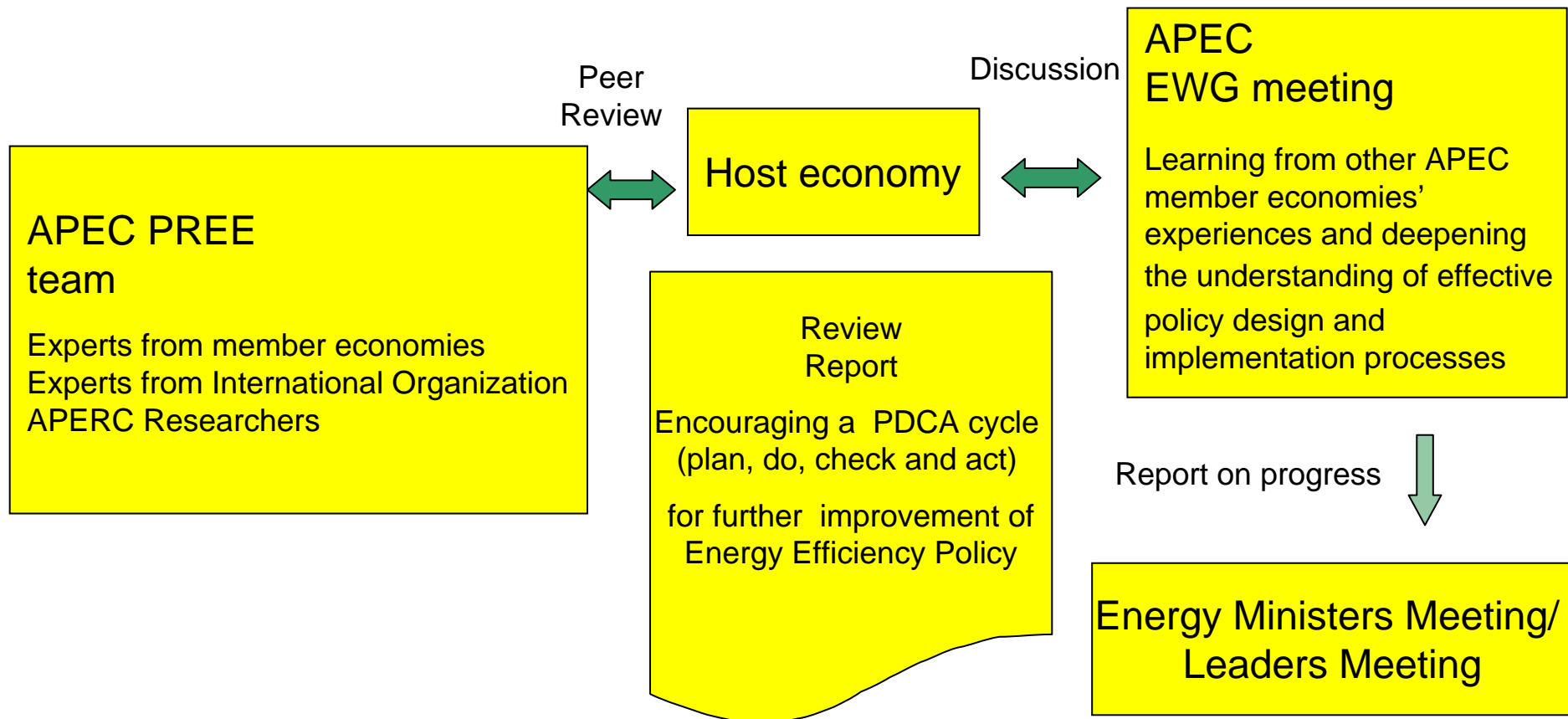
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PREE Mechanism





Progress of PREE

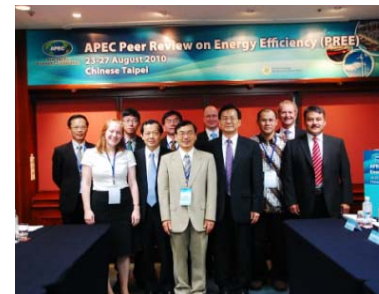
- ❑ In 2009, the first four PREEs for **New Zealand, Chile, Viet Nam and Thailand** were undertaken with reports published on the APERC website (<http://www.ieej.or.jp/aperc>)
- ❑ In 2010, the PREEs for **Chinese, Taipei, Peru and Malaysia** were undertaken with reports published on the APERC website (<http://www.ieej.or.jp/aperc>)
- ❑ The reports made a number of *recommendations* that have been welcomed by the participating economies, indentifying barriers – *financial, technical* (e.g. end-use data, experts, standards, monitoring and evaluation, product testing) and *political*.



New Zealand



Viet Nam



Chinese Taipei



Malaysia



Chile



Thailand



Peru



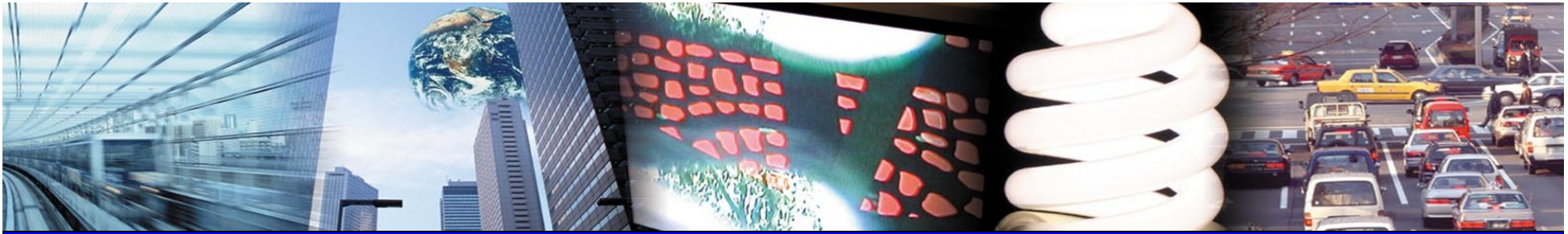
Some Highlights from PREE Final Reports

- Overall, the survey found that all 7 economies (**NZ, Chile, Viet Nam, Thailand, Chinese Taipei, Peru and Malaysia**) have looked into the urgent need to expand their implementation of EE policies as well as development of incentives to encourage EE investment.
- Energy efficiency and conservation has become one of the important element in the energy policy framework;
- Both political strong leadership and carefully designed programs to implement more vigorous energy efficiency improvement measures are required to maximize energy saving potential.
- Lacking of a mechanism to monitor and evaluate energy efficiency programs is one of the major barrier. The problem in this area is mainly because of the shortage of human capital and insufficient end-use energy data;



Some Highlights from PREE Final Reports (cont.)

- Financial barrier; Lack of access to capital and difficulty in getting loan because some EE projects are perceived risky by lenders;
- Lack of infrastructure and human resource in some areas such as *standard setting and testing* to ensure full implementation of high performance EE policies;
- Energy subsidy which behaves as a disincentive on energy efficiency improvement; and
- Transport sector is a very challenging area for policymakers to implement energy efficiency programs— although, all economies have realized the necessity of vehicle fuel economy standards.



Follow up PREE

In the phase 3 PREE “Follow-up PREE” will start with following objectives

- To assist one former PREE host economy in implementing the recommendations by the PREE review teams.
- To fill the gap between the implementation of EE action plans and the monitoring and evaluation of those plans in the APEC economies.
- To establish the analytical tools for evaluating and monitoring the implementation of host economy's existing energy efficiency action plans.
- To contribute to strengthen APEC economies' efforts in promoting energy efficiency improvement that envisaged by APEC leaders

In the first follow-up PREE, Viet Nam will host the workshop on know how transfer, monitor and evaluation of EE measures through the training program in February of 2012.



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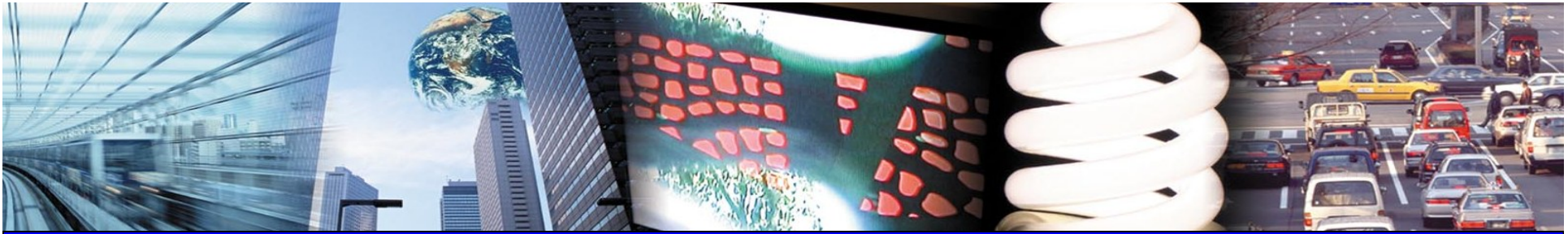
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Future Plans

PRLCE Phase 1 and 2

- The PRLCE Phase 1 will put its initial focus on renewable energy power supply.
- Two economies, Malaysia and Thailand, have already volunteered to host PRLCEs Phase 1 with focus on Renewable Energy in the fourth quarter (Nov – Dec) of 2011.
- **APEC Funding is expected to be available for two additional economies to host Peer Review on Low-Carbon Energy Supply Phase 2 in 2012.**

PREE Phase 3 and 4

- Two economies, Indonesia and Philippines, have already volunteered to host PREEs in the fourth quarter of 2011 and first quarter of 2012.
- The first follow up PREE will be hosted by Viet Nam in the February, 2012 to implement the recommendations from PREE.
- **APEC Funding is expected to be available for additional economies to host PREE/Follow-up PREE in 2012.**



Participation Invitation

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

The participation by right experts , especially members of APEC expert groups e.g. EGNRET is the important key to success.



Thank you for your kind attention

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