



**Asia-Pacific
Economic Cooperation**

APEC Peer Review on Energy Efficiency (PREE)

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APEC PREE is a voluntary co-operative review process by APEC member economies coordinated by APERC under the auspices of the APEC Energy Working Group

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APEC Peer Review on Energy Efficiency (PREE)

Background

(1) Energy security and climate change have emerged as two key and related challenges to maintaining regional economic growth and prosperity. In their Darwin Declaration of 29 May 2007, APEC Energy Ministers recognized the importance of pursuing policies and technologies to promote the development of cleaner energy and the improvement of energy efficiency and conservation.

The improvement of energy efficiency offers many cost-effective opportunities to achieve energy security, improve business productivity and mitigate greenhouse gas emissions. Many of these opportunities can be attained in a shorter timescale (and in a manner compatible with economic growth) than can investments in clean energy supply infrastructure, which though also needed are longer term in nature.

Disseminating best practices and technologies for improving energy efficiency helps APEC member economies meet increasing energy needs with a lower environmental impact. Furthermore, many energy efficiency measures can pay for themselves through reduced energy costs. There is abundant potential for energy efficiency improvements in the power generation, industrial, transportation, public, residential and commercial sectors. In fact the IEA estimates that about 80% of potential CO₂ emissions reductions between now and 2030 could come from improving energy efficiency. As such, many economies would benefit from developing clear goals and action plans towards improving energy efficiency in these sectors. In recognition of this, APEC Energy Ministers, through their Darwin Declaration, have agreed to:

- encourage APEC economies to individually set goals and formulate action plans for improving energy efficiency on an overall and/or sector basis;
- direct the EWG to collaborate with the IEA to develop energy efficiency indicators and compile best practices that can be used to help formulate and track progress towards such voluntary goals and action plans;
- direct the EWG to strengthen efforts to share information on energy efficiency policies and measures, identify effective energy efficiency approaches and review progress towards efficiency goals; and
- In order to assist interested economies in developing policies that support energy security and environmental objectives have directed the EWG to develop a voluntary Energy Peer Review Mechanism, with an initial focus on progress toward attaining energy efficiency goals.

(2) Through their Sydney Declaration on Climate Change, Energy Security and Clean Development of 9 September 2007 APEC Leaders announced a forward work program of practical, co-operative actions and initiatives designed to support economic growth and development and to further contribute to the reduction of global greenhouse gas emissions. In its Action Agenda, APEC Leaders have highlighted the importance of energy efficiency and:

- agree to work towards achieving an APEC-wide regional aspirational goal of a reduction in energy intensity of at least 25 per cent by 2030 (with 2005 as the base year);

- encourage all APEC economies to set individual goals and action plans for improving energy efficiency, taking into account this aspirational goal, and reflecting the individual circumstances of different economies;
- agree to facilitate and review progress through the voluntary APEC Energy Peer Review Mechanism (Peer Review Energy Efficiency), as established by APEC Energy Ministers in May 2007, with a report back to APEC Leaders in 2010.

(Please see Appendix)

Objectives

The objectives of the APEC PREE, endorsed by APEC leaders at their 2007 meeting are to:

- share information on energy efficiency performances as well as on policies and measures for improving energy efficiency;
- provide opportunities for learning from other APEC member economies' experiences and for broadening the network among energy efficiency policy experts;
- explore how energy efficiency goals on an overall and/or sectoral basis and action plans could be effectively formulated in each APEC economy under review, taking into account the diversity of possible strategies that could be used, according to the circumstances of individual member economies;
- monitor progress toward attaining energy efficiency goals on an overall and/or sectoral basis and implementing action plans, if such goals and action plans have been already formulated at the time of the review;
- provide recommendations for voluntary implementation on how implementation of action plans could be improved with a view to achieving energy efficiency goals.

Activities to be undertaken under the PREE

Two activities are undertaken as part of the PREE, namely:

(a) **Peer Reviews** of volunteer member economies

(b) **Compendium** of energy efficiency policies of the APEC member economies based on either APEC voluntary PREE or Energy Efficiency aspects of the IEA Energy Policy Review.

Part A. Principles and Guidelines for Peer Review

(Please refer to Appendix)

Background

EWG35 endorsed a Peer Review on Energy Efficiency (PREE) proposal that puts in place an ongoing series of reviews of economy energy efficiency policies and programs across APEC economies.

The reviews are 'peer reviews', that is, the reviewers are energy efficiency experts sourced from peer APEC economies.

Japan is providing substantial self-funding and has applied for APEC Central Fund support through to 2009.

The paper outlining the PREE that was endorsed by EWG35 (Lima, March 2008) is appended for reference.

EWG agreed expectations

EWG is to report progress of the PREE to Leaders in 2010. With APEC leaders placing considerable importance on the PREE process, we must ensure a robust process, clear guidelines and a clear sense of the learnings from this process.

A preliminary report of the first Peer Review will be presented at EWG36 in Manila in December 2008. EWG members agreed at EWG35 that reports on both the inaugural Peer Reviews (New Zealand and Chile) will be presented at EWG37 (late April 2009 in Chile) for EWG discussion and endorsement.

Peer Review principles and objectives

The Peer Review should:

- recognize and be responsive to the context for energy efficiency in the economy;
- review the economy's entire energy efficiency and conservation policy framework;
- review strategic and sectoral programs;
- review the effectiveness of delivery activity strategy;
- review the analytical processes used to estimate expected impacts of policies and measures;
- review the analytical processes used to evaluate options and monitor progress;
- highlight and acknowledge progress
- highlight areas for development and make practical suggestions;
- seek to identify high performance programs.

The Peer Review may cover wider energy policies as long as it is meaningful in the context of energy efficiency policies and programs. The Peer Review should not critique the political or economic systems or development context of an economy.

Peer Review governance and accountability

The Peer Review process is a voluntary review process. Therefore each Peer Review assessment is an agreed cooperative process between the economy, APERC and the review team, under the auspices of the EWG.

As the EWG has overall accountability to leaders for the Peer Review, economies wishing to undertake a Peer Review should initially approach EWG Secretariat in order to register their interest in undertaking a voluntary Peer Review and seek formal recognition of that at the next EWG meeting. (Economies wishing to undertake a Peer Review may consult with APERC before the official registrations.)

The primary accountability for each individual Peer Review is shared by the economy being reviewed and the Review Team.

Roles and responsibilities

EWG Secretariat roles are to:

- distribute to members in advance the draft report for discussion and endorsement at the next available EWG meeting;
- report progress to APEC senior officials;
- ensure appropriate reporting by EWG to APEC Leaders.

Peer Review volunteer economies roles and responsibilities are to:

- participate in the preliminary planning of the review;
- confirm with APERC the proposed experts and the review team;
- provide pre-briefing information regarding the energy sector within the economy, as well as energy efficiency policies and programs to the review team prior to the visit;
- respond to questionnaires and submit additional information requested by the review team prior to the visit;
- suggest a preliminary list of actors and institutions with whom the review team should meet during the visit, in accordance with the review guidelines;
- coordinate the visit program;
- suggest accommodation and provide practical and logistic information and contacts that will be needed by the review team during the visit;
- coordinate the logistic arrangement with APERC;
- provide English-language documents and explanation in meetings, as needed;
- submit comments to the review team on the preliminary report;
- work with the review team to ensure that the final draft report meets the volunteer economy's requirement.

APERC roles and responsibilities are to:

- play an important role in the formation of the review team through working with volunteer economies;
- prepare the draft final report in a reasonable level of quality with consistent reporting format.

Review Team roles and responsibilities are to:

- work together in collegiate manner under the direction of the team leader;
- be accountable for the quality of the review process;
- undertake preparation for the review, including reading pre-briefing information, preparing for comments for discussion;
- conduct discussions with relevant agencies responsible for energy efficiency policy and program development, industries and other organizations involved with energy efficiency policy;
- present its findings, including its recommendations, which will serve as the basis for the preparation of a post-visit Draft Review Report;
- finalise the Draft Review Report;
- consult with the economy on the Draft Final Report.

Confidentiality & transparency

All participants in this process must maintain confidentiality of Peer Review information.

Until the Draft Final Peer Review report is released by the economy to the EWG Secretariat, the review team APERC and the Peer Review Economy must treat all content and discussions as confidential.

Furthermore, the economy may decide that specific information of the Peer Review be declared confidential; e.g. commercial-in-confidence information.

Needs & expectations of the reviewed economies

When economies offer themselves for Peer Review, they expect a careful application of Peer Review process. In particular the review must treat with sensitivity;

- The unique political and policy processes in each economy. Each economy has differing constitutional and political procedures. The review should refrain from critiquing the political structure and processes or the unique overall context of each economy.
- The status and context of ministries and agencies in the Peer Review economy.
- The development and economic status of the Peer Review economy.

Proposal for selecting an APEC economy for review

The Peer Review is a voluntary system. EWG will encourage APEC Member Economies to volunteer to undergo the APEC Peer Review.

It is envisaged that an APEC Peer Review for one or two APEC member economies will be discussed at each meeting of the EWG.

Given that IEA Member economies are subject to the IEA In-depth Energy Policy Review every four–five years, APEC members of the IEA may wish instead to present the chapter on energy efficiency of a recent IEA In-depth Energy Policy Review for discussion at EWG plenary. These members are encouraged to volunteer to undergo an APEC EWG Peer Review.

Part B. Peer Review Project Guidelines

1. Suggested Peer Review project development timetable

Development of a successful Peer Review requires clear organisation, especially if 2 – 4 Peer Reviews are undertaken in any one year. This section outlines the tasks that should be undertaken to ensure the planning of a Peer Review and essential stages are well planned and undertaken in good time. Table 1 provides a suggested 12-stage work plan that can be used as a checklist.

Table 1

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

2. Peer Review Team

Review Team role

The Review Team should be guided by the Peer Review principles and objectives in Part A.

Review Team perspectives should incorporate policies, processes, and programs, keeping in mind APEC leaders' aspirational goal of a reduction in energy intensity of at least 25 per cent by 2030.

It is suggested that Peer Review Team consider a broad range of issues such as cross-sectoral issues; analysis, rationale, market characteristics, design, policy settings, consultation and drafting of policies; integration with related policies; environmental and social /economic policies; monitoring processes; perspectives of NGO key stakeholders, and process of review for energy efficiency policies and programs. ;

Requirements for Review Team

Experts are expected to have comprehensive understanding on energy efficiency policy strategies as well as the in-depth expertise in specific sector(s).

Review Team experts will demonstrate an ability to meet or exceed the following criteria;

- national (preferably international) experience and expertise in energy efficiency,
- experience across a range of technical, policy and program settings – it is important that reviewers can look across program or sector boundaries to identify missing components and propose new synergies,
- have sufficient experience to apply sound judgement and political acumen – it is expected that the team will comprise senior experts – they will be in management or leadership roles in their respective economies,

It is important that the review team contain a breadth of expertise – diversity is important to ensuring effective questioning and understanding of an economy's characteristics. Ideally, experts from previously reviewed and next to be reviewed economies will be included to ensure continuity of the Peer Review process.

Participation of the International Energy Agency

The participation of the IEA, with its considerable experience in peer review processes and energy efficiency policy analysis, is recommended and is envisaged in its role as an EWG guest. Volunteer economies are encouraged to consider the addition of an IEA representative to the review team.

Selection of Review Team

The volunteer economy and APERC will jointly select a review team.

Consistent with APEC PREE Proposal endorsed by EWG 35, the review team will nominate a Review Team Leader

The review team leader's role is to:

1. Liaise between the Economy representatives and the PREE review team
2. Ensure an effective co-ordination of the PREE team
3. Lead the compilation of the preliminary report
4. Work with the Economy in finalizing the PREE review teams report

3. Peer Review report

The Peer Review report will be the key output of the Peer Review process. The Peer Review Team is responsible for preparing the report with clear consensus of recommendations and the rational or reasons for these recommendations.

4. Preparation for the Review Team

Review Team establishment

Once an APEC member economy has informed the EWG of its intention to undergo a Peer Review, a review team will be formed of no more than ten personnel including observers. The review team should include energy efficiency experts from at least three member economies, where possible.

The Economy and APERC should identify the review team members well before the review visit. It should be noted that there is no prescribed formula to this selection; however, the best available energy efficiency experts from across APEC economies should be selected.

The Economy and APERC may also request nominations from member economies through the APEC EWG Secretariat.

The Economy and APERC should inform the proposed review team member's EWG economy representative to ensure economy endorsement for that the proposed review team and then proceed to make a request to the proposed review team.

Pre-briefing information for Review Team

When the review team is confirmed, the volunteer economy will provide briefing materials to the review team members, for example:

- introductory material about economy;
- energy balance;
- key energy trends and dynamics data;
- energy and energy efficiency/energy conservation policies;
- statutory basis for energy efficiency/energy conservation;
- any consultation documents;
- monitoring and reporting documentation including methodology;
- any relevant reviews.

Review process

Please refer to “the Review Team roles and responsibilities” in Part A.

The duration of the visit should be up to one week.

The volunteer economy should aim to ensure a good spread of interviews across government and non-government agencies. Should the review team wish to interview a particular agency not scheduled it is expected that the volunteer economy will try to arrange an interview, recognizing that may not be possible at short notice.

Review criteria

The Review Team is reminded of the 2007 APEC Leaders’ statement of aspirational goal of a reduction in energy intensity of at least 25 per cent by 2030.

It is essential in a peer review that a team of experts cooperate to effectively assess the basis for and actions arising from a policy or program. It is critical that the peer review team have the freedom to develop effective questions and observations, but also important that the peer review team act with objectivity and respect for the subject. Primarily, the peer review relies on the good judgment of the peer review team and cooperation of the volunteer economy.

Developing good review criteria is critical for ensuring an effective Peer Review. Given the diversity of APEC member economies, at least at the initial stages of the Peer Review process, it would be more sensible to set qualitative criteria rather than quantitative criteria concerning whether the economy to be reviewed is implementing effective energy efficiency policies. The following criteria reflect on the Peer Review proposal endorsed by EWG members at EWG 35 and are offered as guidance for the review team.

- Does the APEC member economy have overall and/or sectoral energy efficiency goals? Are they measurable and verifiable?
- If measurable and verifiable overall and/or sectoral energy efficiency goals have been set, is the APEC member economy envisaging reasonable efforts for exploring the potential for future improvement in energy efficiency?
- Is the government collecting data on the trends of energy consumption and energy efficiency performance in all or key energy consuming sectors?
- Is the government monitoring the effectiveness of its energy efficiency policies and measures?
- Does the APEC member economy have overall and/or sector-specific energy efficiency action plans? If relevant to the chosen energy efficiency strategy of the APEC member economy, do they contain concrete policies and measures for achieving energy efficiency goals?
- Alternatively, does the APEC Member economy have a broader suite of regulatory and/or market-based responses (e.g., domestic emissions trading) which could encourage energy efficiency improvement?
- Are the action plans being appropriately implemented and backed by sufficient financial and human resources, appropriate to the chosen energy efficiency strategy?
- Are there any inconsistencies among policies and measures, for example, spending a lot of government resources for improving energy efficiency while subsidizing energy prices?

- What are the roles of the government and the private sector for pursuing energy efficiency? What kind of public-private partnership (or cooperation) is occurring?
- Is the APEC member economy on the right track towards achieving its own energy efficiency goals? If not, what options for implementation are available that are relevant to the chosen energy efficiency strategy and that reflect the individual circumstances of the member economy being reviewed?

Preliminary draft review report

A preliminary draft Review Report with some findings and rationale behind findings will be prepared by the review team during the review visit.

The preliminary report will reflect the consensus of the review team and be presented to the volunteer economy on the last day of the review visit. When there is disagreement between the volunteer economy and the review team findings, the review team leader and the volunteer economy will work to resolve differences.

The review team leader and APERC will prepare a draft Review Report from the preliminary report for comments/ approval by volunteer economy. Final draft Review Report including findings approved by volunteer economy and the review team will be forwarded to EWG Lead Shepherd and EWG Secretariat approximately 1 month before the next EWG meeting.

The final draft Review Report will be circulated to EWG Members for discussion and endorsement at the next available EWG meeting.

Discussion at EWG Meetings

The draft Review Report will be presented by the volunteer economy and APERC to the EWG for discussion. EWG members will be invited to ask questions and comment on the report. The Review Report will officially become final once the EWG endorses the draft, with consent from the reviewed APEC economy. The EWG Secretariat will ensure that a discussion session is on the EWG meeting agenda. .

As the review is voluntary, it should be noted that any implementation is at the discretion of the volunteer economy.

Publication

The APEC EWG Secretariat and APERC will place the final report on the EWG and the APERC websites after the report is endorsed by EWG members.

Part C. Peer Review Forward Program

The first Peer Review is scheduled in New Zealand in November 2008 and will be funded jointly by Japan and New Zealand.

The EWG Peer Review project proposal for APEC funding, if approved, begins in January 2009 and ends in December 2009, with a Peer Review in Chile in early 2009, another in Viet Nam in June 2009, and the fourth to be scheduled later that year.

Part D. Compendium of Energy Efficiency Policies of APEC Member Economies

Section C of the appended EWG member-endorsed proposal for APEC Peer Review outlines the expectations of the Compendium.

EWG members instructed the APERC at EWG35 (Iquitos, March 2008) to compile the energy efficiency policies of all the APEC member economies under a common format including energy efficiency policy goals and action plans which reflect the diversity of approaches that could be adopted by member economies. This Compendium would serve as a basis for information sharing on energy efficiency policies and measures.

APERC is planning to present that the draft common format for compendium at the APERC workshop during EWG36 (Manila, December 2008) to invite comments and for endorsement by the EWG members. APERC will present draft compendium for all APEC economies at the subsequent EWG meetings in 2009 and 2010 so that APERC can contribute to the EWG progress report on PREE to the APEC Leaders at their meeting in 2010. It will be hosted on the APERC website with links from EWG and APEC Secretariat websites and periodically updated.

The compendium will seek to ensure compatibility between the APEC PREE and the IEA process. Closer cooperation with the IEA and other regional fora is essential for robust and transparent global methodology that enables comparability and consistency.

APEC Leaders, through their Sydney Declaration, have agreed to review the progress towards a reduction in energy intensity through the voluntary APEC Energy Peer Review Mechanism at their 2010 meeting. The current status of the ongoing Compendium of Energy Efficiency Policies for all APEC Member Economies, including each economy's energy efficiency goals and action plans, as well as reporting of completed Peer Reviews will be presented to APEC leaders.

APPENDIX



APEC Peer Review on Energy Efficiency (PREE)

Purpose: Consideration

Submitted by: Japan



35th Energy Working Group Meeting

**Iquitos, Peru
2-7 March 2008**

APEC Peer Review on Energy Efficiency (PREE) (Final)

February 2008

Background

Energy security and climate change have emerged as two key and related challenges to maintaining regional economic growth and prosperity. In their Darwin Declaration of 29 May 2007, APEC Energy Ministers recognized the importance of pursuing policies and technologies to promote the development of cleaner energy and the improvement of energy efficiency and conservation.

The improvement of energy efficiency offers many cost-effective opportunities to achieve energy security, improve business productivity and mitigate greenhouse gas emissions. Many of these opportunities can be attained in a shorter timescale (and in a manner compatible with economic growth) than can investments in clean energy supply infrastructure, which though also needed are longer term in nature.

Disseminating best practices and technologies for improving energy efficiency helps APEC member economies meet increasing energy needs with a lower environmental impact. Furthermore, many energy efficiency measures can pay for themselves through reduced energy costs. There is abundant potential for energy efficiency improvements in the power generation, industrial, transportation, public, residential and commercial sectors. In fact the IEA estimates that about 80% of potential CO₂ emissions reductions between now and 2030 could come from improving energy efficiency. As such, many economies would benefit from developing clear goals and action plans towards improving energy efficiency in these sectors. In recognition of this, APEC Energy Ministers, through their Darwin Declaration, have agreed to:

- encourage APEC economies to individually set goals and formulate action plans for improving energy efficiency on an overall and/or sector basis;
- direct the EWG to collaborate with the IEA to develop energy efficiency indicators and compile best practices that can be used to help formulate and track progress towards such voluntary goals and action plans;
- direct the EWG to strengthen efforts to share information on energy efficiency policies and measures, identify effective energy efficiency approaches and review progress towards efficiency goals; and
- In order to assist interested economies in developing policies that support energy security and environmental objectives have directed the EWG to develop a voluntary Energy Peer Review Mechanism, with an initial focus on progress toward attaining energy efficiency goals.

Through their Sydney Declaration on Climate Change, Energy Security and Clean Development of 9 September 2007 APEC Leaders announced a forward work program of practical, co-operative actions and initiatives designed to support economic growth and development and to further contribute to the reduction of

global greenhouse gas emissions. In its Action Agenda, APEC Leaders have highlighted the importance of energy efficiency and:

- agree to work towards achieving an APEC-wide regional aspirational goal of a reduction in energy intensity of at least 25 per cent by 2030 (with 2005 as the base year);
- encourage all APEC economies to set individual goals and action plans for improving energy efficiency, taking into account this aspirational goal, and reflecting the individual circumstances of different economies;
- Agree to facilitate and review progress through the voluntary APEC Energy Peer Review Mechanism, as established by APEC Energy Ministers in May 2007, with a report back to APEC Leaders in 2010.

Cognisant of the Sydney and Darwin Declarations, this paper proposes a possible modality of APEC Peer Review on Energy Efficiency (subsequently referred to as 'APEC/PREE') for discussion by the EWG.

APEC Peer Review on Energy Efficiency (PREE)

a) Objective

The objectives of the APEC/PREE are suggested to be:

- share information on energy efficiency performances as well as on policies and measures for improving energy efficiency;
- Provide opportunities for learning from other APEC member economies' experiences and for broadening the network among energy efficiency policy experts.
- explore how energy efficiency goals on an overall and/or sectoral basis and action plans could be effectively formulated in each APEC economy under review, taking into account the diversity of possible strategies that could be used, according to the circumstances of individual member economies;
- monitor progress toward attaining energy efficiency goals on an overall and/or sectoral basis and implementing action plans, if such goals and action plans have been already formulated at the time of the review;
- provide recommendations for voluntary implementation on how implementation of action plans could be improved with a view to achieving energy efficiency goals;

b) Proposed activities to be undertaken under the PREE

Two activities are proposed to be undertaken as part of the PREE, namely:

(a) Peer reviews of volunteer member economies (PREE)

(b) Compilation/Compendium of energy efficiency policies of the APEC member economies based on either APEC voluntary PREE or Energy Efficiency aspects of the IEA Energy Policy Review.

These two activities are described in more detail below.

c) Compilation of Energy Efficiency Policies of the APEC Member Economies

For this activity, the EWG could instruct the APERC to compile the energy efficiency policies of all the APEC member economies under a common format which reflects the diversity of approaches that could be adopted by member economies. This "Compendium" would serve as a basis for information sharing on energy efficiency policies and measures. It could be hosted in the website of the EWG and/or APERC and periodically updated, for example, once a year.

The compendium should seek similar quality with that of the Energy Policies of the IEA Countries reports albeit focusing on energy efficiency. Ensuring compatibility between the APEC PREE and the IEA process is useful for synergy effect. Closer cooperation with the IEA and other regional fora is essential for robust and transparent global methodology that enables comparability and consistency.

Information which could be included in this Compendium could cover:

- Current energy efficiency performances on overall and/or sectoral basis (energy data collected by the APERC can be presented here);
- Overall and/or sectoral goals for improving energy efficiency;
- Overall and/or sectoral (industrial, transport, residential/commercial, public, power sector etc) energy efficiency strategies and action plans. These may include:
 - Energy management at large-scale factories and offices;
 - Minimum energy efficiency standards for energy consuming appliances and vehicles;
 - Energy efficiency labeling;
 - Economic incentives and fiscal policies;
 - Information campaigns aimed at consumers and industry;
 - Guidelines for public procurement;
 - Research and development of energy efficient technologies;
 - Other policies which could have strong impact on energy efficiency, including economic instruments such as a domestic emissions trading scheme.
- Monitoring and assessment of the effectiveness of energy efficiency policies.

(Note: The above list is just for example and is not considered to be complete)

The Compendium could also be utilized by the APERC for developing an “energy efficiency scenario” or “policy scenario” in its biennial APEC Energy Supply and Demand Outlook.

The compilation of energy efficiency policies should not duplicate existing cooperative efforts in other international energy fora. For example, the IEA Member economies provide updated information on their energy efficiency policies and measures to the IEA's “Energy Efficiency Update” and “Energy Efficiency Database”. Furthermore, in the East Asia Summit region, the Asia Energy Efficiency & Conservation Collaboration Center in Japan will start a stock take of existing energy efficiency policies and measures in its Member economies. These efforts should be coordinated and maximum inter-fora synergies should be explored.

The compilation of energy efficiency policies could serve as the basic information for conducting the reviews of member economies APEC/PREE. Once an APEC member economy decides to volunteer to undergo the PREE process, the Compendium should be updated to incorporate the most recent data and developments prior to the review.

Furthermore, and as described above, APEC Leaders, through their Sydney Declaration, have agreed to review the progress towards a reduction in energy intensity through the voluntary APEC Energy Peer Review Mechanism with a report back to APEC Leaders in 2010. While it will be difficult to review all APEC economies by 2010, it should be possible to complete the compilation of energy efficiency policies for all APEC member economies, including each economy's energy efficiency goals and action plans, as well as reporting the outcomes of PREEs that have been completed.

d) Selecting an APEC Economy to be reviewed

The PREE is a voluntary system and the EWG will encourage APEC Member economies to volunteer to undergo the APEC/PREE. It is envisaged that an APEC/PREE for one or two APEC member economies will be discussed at each meeting of the EWG, i.e. 2–4 reviews per year.

Given that IEA Member economies are subject to the IEA In-depth Energy Policy Review every four-five years, APEC members of the IEA may wish to instead present the chapter on energy efficiency of their IEA review for discussion at EWG plenary. However, such members are alternatively able to nominate to undergo a 'conventional' PREE.

e) Review Team

Once an APEC member economy has informed the EWG of its intention to undergo a PREE. The review team will nominate a leader. Because this is an APEC process, the APERC is expected to play an important role in this process. The participation of the IEA, which has much experience in peer review processes and energy efficiency policy analysis, is recommended and is envisaged in its current role as an EWG Guest. The EWG Secretariat will provide secretariat services for the function of the PREE, including asking member economies to nominate experts, organising review teams, liaising with the economy to be reviewed (in order to develop logistical arrangements and schedules), assisting with the dissemination of the draft. It is important that APEC PREE meets similar standards as the IEA reviews – a comparable approach is preferred for the sake of synergy effect. It would be sensible to draw on experts who have previously been involved in the IEA review processes.

The review team will interview people from ministries responsible for energy efficiency policy and program development, industries or other important organizations which have an influence on energy efficiency policy (e.g. local governments, regulators, electricity and gas market regulators and operators, energy companies, industry associations, consumer associations etc). The duration of the visit will be up to one week.

Prior to the visit, officials from the volunteering economy will provide comprehensive background information on current and planned energy efficiency policies, including those other policies that may have a strong impact on energy efficiency, to the review team, organized where possible by major energy-using sectors (e.g., transport, industry, power sector etc.). This pre-review planning will reduce the time required for basic descriptive information during the visit and will increase the time available for discussion of issues concerning the energy efficiency policies and measures in place.

During their visit the review team will prepare a short paper that includes a concise description of the current situation (energy efficiency performance, energy efficiency goals and policies, broader policies which impact on energy efficiency improvement etc.) and conclude with recommendations on how to further improve energy efficiency performance, policy planning and implementation.

On the final day, the review team will present its preliminary findings, including its recommendations, to the APEC economy under review in order to exchange views. The findings and discussions will then serve as the basis for the preparation of a post-visit Draft Review Report.

f) Review Criteria

Developing good review criteria is critical for ensuring an effective PREE. Given the diversity of APEC member economies, at least at the initial stages of the PREE process, it would be more sensible to set qualitative criteria rather than quantitative criteria concerning whether the economy to be reviewed is implementing effective energy efficiency policies. In the case of the IEA In-depth Review, the IEA Shared Goals, which enumerate qualitative policy goals for ensuring effective policy design and implementation, will be used as the review criteria. However, if a reviewed APEC member economy has set its own overall and/or sectoral energy efficiency goals, quantitative checks could be conducted by checking its progress towards its goals. Furthermore, the on-going collaborative efforts between the IEA and APEC towards the development of sectoral energy efficiency indicators and the compilation of good practices for improving energy efficiency in key energy consuming sectors could be utilized for PREE once they are completed. With this in mind,

PREE could be conducted based on the following criteria, taking into account each member economy's specific national circumstances:

- Does the APEC member economy have overall and/or sectoral energy efficiency goals? Are they measurable and verifiable?
- If measurable and verifiable overall and/or sectoral energy efficiency goals have been set, is the APEC member economy envisaging reasonable efforts for exploring the potential for future improvement in energy efficiency?
- Is the government collecting data on the trends of energy consumption and energy efficiency performance in all or key energy consuming sectors?
- Is the government monitoring the effectiveness of its energy efficiency policies and measures?
- Does the APEC member economy have overall and/or sector-specific energy efficiency action plans? If relevant to the chosen energy efficiency strategy of the APEC member economy, do they contain concrete policies and measures for achieving energy efficiency goals? Alternatively, does the APEC Member economy have a broader suite of regulatory and/or market-based responses (e.g., domestic emissions trading) which could encourage energy efficiency improvement?
- Are the action plans being appropriately implemented and backed by sufficient financial and human resources, appropriate to the chosen energy efficiency strategy?
- Are there any inconsistencies among policies and measures, for example, spending a lot of government resources for improving energy efficiency while subsidizing energy prices?
- What are the roles of the government and the private sector for pursuing energy efficiency? What kind of public-private partnership (or cooperation) is occurring?
- Is the APEC member economy on the right track towards achieving its own energy efficiency goals? If not, what options for implementation are available that are relevant to the chosen energy efficiency strategy and that reflect the individual circumstances of the member economy being reviewed?

g) Draft Review Report

The draft Review Report (of 20-30 pages) will be prepared by the APERC expert with inputs from the PREE review expert team during the review visit. The draft Review Report will be circulated to the Team Leader, team members and the EWG Secretariat for their comments. Following this consultation process, the draft Review Report will be circulated to the APEC volunteer economy under review for their comment. When there is disagreement between the volunteer economy and the review team findings, the APERC, the review team leader and the volunteer economy will attempt to resolve differences. EWG Secretariat will provide mediation support if required. The agreed draft Review Report will be circulated to EWG Members for discussion at the next EWG meeting.

h) Discussion at the EWG

The draft Review Report will be presented by the review team leader to the APEC/EWG for discussion. The representative of the APEC volunteer economy will be invited to respond to it. Then, the EWG will be invited to ask questions and comment on the report and learn from and share their own experiences of the reviewed APEC economy. The Review Report will officially become final once the EWG approves the draft, with consent from the reviewed APEC economy. The EWG Secretariat will liaise with the EWG volunteer economy to ensure that a morning or afternoon session is available for the discussion of the PREE.

As the review is voluntary, any implementation of recommendations coming out of the PREE process would be at the discretion of the volunteer economy.

i) Publication

The report will be put on the website of the APEC/EWG and/or the APERC.

Steps Forward

The APEC/PREE may be introduced on a step-by-step basis.

a) Presentation of the IEA Review

First of all, there should be an appropriate agreed understanding of what the peer review process is. For this purpose, APEC Member economies belonging to the IEA could (but are not obliged to) present the energy efficiency chapters of their most recent In-depth Reviews for information, along with an update on policies and measures that have occurred since that review. Japan can volunteer to present its IEA In-depth Review at EWG 35 in March 2008.

While the IEA In-depth Review is for the IEA Member economies, some Non-Member economies have also voluntarily undergone the similar review process. For example, an In-depth Review for Indonesia was conducted in June 2007. The energy efficiency chapter of the Indonesia review could also be presented as an example, upon consent from Indonesia at the EWG 35.

b) Pilot Review

Following presentation of the IEA In-depth Review, the APEC/EWG could seek to find one or two APEC economies to volunteer to undergo the “pilot” APEC/PREE envisaging discussion at EWG36 in September 2008 or EWG37 in March 2009. The effectiveness of the “pilot” APEC/PREE and ways for improving the process can also be discussed at these meetings.

c) Developing Policy Analysis Capacity of the APERC

If the APERC is to play a key role in the PREE, the capacity of the APERC needs to be further enhanced, including increasing the portfolio of energy efficiency experts among its visiting researchers. Visiting researchers will be required to undertake this assignment without sacrificing the quality of existing APERC work under stringent budget constraints. This will require the recruitment of capable visiting researchers from all Member economies. With this in mind, the APERC should start advertising for recruitment of 1–2 energy efficiency experts as soon as possible, while maintaining the recommendation process by the economies of origin.