



Compendium of Energy Efficiency Policies in APEC Economies

APERC Workshop at the 38th APEC Energy Working Group (EWG38)

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Asia-Pacific
Economic Cooperation

OUTLINE

- 1. Rationale**
- 2. APEC EE Policies and Measures: Overall**
- 3. Policy Instruments & Measures
: by Sector**
- 4. Recent EE Action Plans and Measures
: by Economy**
- 4. Conclusion & Way Forward**

1. RATIONALE

Overall Objectives: (based on the **2007 APEC Leaders' Declaration in Sydney**)

“To **serve as a basis** for **information sharing** on energy efficiency policies and measures which reflect the **diversity of approaches** that could be adopted by member economies.”

- **Share information** on EE performance as well as **policies and measures** for EE improvement
- Provide opportunities to **learn** from other member economies' experiences and broaden the **network** for EE policy experts
- Explore how **overall / sectoral EE goals** and **action plans** could be effectively formulated, taking into account the diversity of possible strategies to be used
- Monitor progress toward attaining EE goals on an overall and/or sectoral basis and the implementation of action plans.

To achieve the above objectives, two activities are being undertaken:

- (1) Peer Review of volunteer member economies on the progress toward their goals in energy efficiency improvement
- (2) **Compendium of energy efficiency policies and action plans of APEC member economies under a common format**

1. RATIONALE

At the EWG 35 meeting in Peru, APERC was instructed to compile a document of energy efficiency policies for all APEC member economies under a common format

Expected Outcomes:

- The compendium includes
 - 1) Each economy's policy goals** for energy efficiency improvement
 - 2) Measures** for energy efficiency improvement
- A **comparative** summary for important items

Process:

A *common format* for the compendium was developed, and based on that, **questionnaires** were sent to member economies to collect relevant information

Time Frame:

- Draft Compendium: EWG 38 2009
- Updated Compendium: EWG 39 2010

3. Policy Instruments & Measures: by sector

Measures	Sectors	AUS	BD	CDA	CHL
1. EQUIPMENT / APPLIANCE LABELLING	Industrial	partly mandatory	planned	partly mandatory	-
	Commercial	partly mandatory	planned	mandatory	mandatory
	Residential	mandatory	planned	mandatory	mandatory
2. BUILDING STANDARDS	Industrial	-	voluntary	-	under development
	Commercial	mandatory	voluntary	mandatory (vary by prov.)	under development
	Residential	mandatory	-	mandatory (vary by prov.)	under development
3. ENERGY AUDITS	Industrial	partly mandatory	voluntary	voluntary	-
	Commercial	partly mandatory	voluntary	voluntary	-
	Residential	voluntary	-	voluntary	-
4. FINANCIAL INCENTIVES AND SUPPORT	Industrial	available	-	available	available
	Commercial	available	-	available	available
	Residential	available	-	available	available
5. NON GOVERNMENT ORGANISATION INVOLVEMENT		yes	yes	yes	yes
6. AWARDS	Industrial	available	-	available	available
	Commercial	available	-	available	available
	Residential	available	-	available	-
7. CAMPAIGN PROGRAMS	Industrial	training, seminars, workshops, demonstrations	seminars, workshops, exhibits	training, workshops, demonstrations, website	seminars, expos, training, conferences, internet
	Commercial	training, seminars, workshops, demonstrations	seminars, workshops, exhibits	training, workshops, demonstrations, website	seminars, expos, training, conferences, internet
	Residential	training, seminars, workshops, demonstrations	Tri-media	training, website	training, tri-media, internet

3. Policy Instruments & Measures: by sector

Measures	Sectors	PRC	HKC	INA	JPN
1. EQUIPMENT / APPLIANCE LABELLING	Industrial	mandatory	mandatory	under development	mandatory
	Commercial	mandatory	mandatory	under development	mandatory
	Residential	mandatory	mandatory	under development	-
2. BUILDING STANDARDS	Industrial	mandatory	partly mandatory	-	mandatory
	Commercial	mandatory	partly mandatory	voluntary	mandatory
	Residential	mandatory	partly mandatory	-	mandatory
3. ENERGY AUDITS	Industrial	voluntary	partly mandatory	voluntary	voluntary
	Commercial	voluntary	partly mandatory	voluntary	voluntary
	Residential	voluntary	-	-	-
4. FINANCIAL INCENTIVES AND SUPPORT	Industrial	available	available	under development	available
	Commercial	available	available	under development	available
	Residential	available	available	-	-
5. NON GOVERNMENT ORGANISATION INVOLVEMENT		yes	yes	yes	yes
6. AWARDS	Industrial	available	available	available	available
	Commercial	available	available	available	available
	Residential	available	available	-	-
7. CAMPAIGN PROGRAMS	Industrial	seminars, training, exhibits	seminars, workshops	seminars, workshops, exhibits	seminars, training, exhibits, information service
	Commercial	seminars, conferences	seminars, workshops	seminars, workshops, exhibits	seminars, training, exhibits, information service
	Residential	tri-media	media	tri-media	seminars, training, exhibits, information service

3. Policy Instruments & Measures: by sector

Measures	Sectors	ROK	MAS	MEX	NZ
1. EQUIPMENT / APPLIANCE LABELLING	Industrial	mandatory	voluntary	voluntary	partly mandatory
	Commercial	mandatory	voluntary	voluntary	partly mandatory
	Residential	mandatory	voluntary	mandatory	mandatory
2. BUILDING STANDARDS	Industrial	-	voluntary	mandatory	mandatory
	Commercial	mandatory	voluntary	mandatory	mandatory
	Residential	mandatory	voluntary	voluntary	mandatory
3. ENERGY AUDITS	Industrial	mandatory	voluntary	voluntary	voluntary
	Commercial	-	voluntary	voluntary	voluntary
	Residential	-	voluntary	voluntary	voluntary
4. FINANCIAL INCENTIVES AND SUPPORT	Industrial	available	available	available	available
	Commercial	available	available	available	available
	Residential	available	available	available	available
5. NON GOVERNMENT ORGANISATION INVOLVEMENT		yes	yes	yes	yes
6. AWARDS	Industrial	available	available	available	available
	Commercial	available	available	available	available
	Residential	available	-	-	available
7. CAMPAIGN PROGRAMS	Industrial	media, internet, training, exhibition	seminars, training, exhibits	seminars, conferences, workshops, training	media, events
	Commercial	media, internet, training, exhibition	seminars, training	seminars, conferences	media, events
	Residential	Media, internet, exhibition	tri-media	tri-media, internet	media, events

3. Policy Instruments & Measures: by sector

Measures	Sectors	PNG	PE	RP	RUS	SIN
1. EQUIPMENT / APPLIANCE LABELLING	Industrial	-	-	mandatory	partly mandatory	voluntary
	Commercial	-	partly mandatory	partly mandatory	partly mandatory	voluntary
	Residential	-	partly mandatory	partly mandatory	partly mandatory	voluntary
2. BUILDING STANDARDS	Industrial	-	mandatory	-	mandatory	mandatory
	Commercial	-	mandatory	mandatory	mandatory	mandatory
	Residential	-	mandatory	-	mandatory	mandatory
3. ENERGY AUDITS	Industrial	-	-	voluntary	partly mandatory	voluntary
	Commercial	-	-	voluntary	partly mandatory	voluntary
	Residential	-	-	-	partly mandatory	-
4. FINANCIAL INCENTIVES AND SUPPORT	Industrial	-	available	available	-	available
	Commercial	-	available	available	-	available
	Residential	-	available	-	-	-
5. NON GOVERNMENT ORGANISATION INVOLVEMENT		-	yes	yes	-	yes
6. AWARDS	Industrial	-	-	-	-	available
	Commercial	-	-	-	-	available
	Residential	-	-	-	-	available
7. CAMPAIGN PROGRAMS	Industrial	-	seminars, conferences, workshops, training	seminars, workshops	media and events	seminars, workshops, exhibits
	Commercial	-	seminars, conferences	seminars, workshops	media and events	seminars, workshops, exhibits
	Residential	-	tri-media, internet	tri-media	media and events	tri-media

3. Policy Instruments & Measures: by sector

Measures	Sectors	CT	THA	US	VN
1. EQUIPMENT / APPLIANCE LABELLING	Industrial	voluntary	partly mandatory	partly mandatory	planned
	Commercial	partly mandatory	partly mandatory	mandatory	planned
	Residential	partly mandatory	partly mandatory	mandatory	Planned (some products are labelled voluntarily)
2. BUILDING STANDARDS	Industrial	voluntary	partly mandatory	-	partly mandatory
	Commercial	voluntary	partly mandatory	mandatory (vary by state)	partly mandatory
	Residential	voluntary	partly mandatory	mandatory (vary by state)	partly mandatory
3. ENERGY AUDITS	Industrial	partly mandatory	voluntary	voluntary	voluntary
	Commercial	partly mandatory	voluntary	voluntary	voluntary
	Residential	-	-	voluntary	voluntary
4. FINANCIAL INCENTIVES AND SUPPORT	Industrial	available	available	available	available
	Commercial	available	available	available	available
	Residential	available	-	available	available
5. NON GOVERNMENT ORGANISATION INVOLVEMENT		yes	yes	yes	yes
6. AWARDS	Industrial	available	-	available	available
	Commercial	available	-	available	available
	Residential	available	-	available	available
7. CAMPAIGN PROGRAMS	Industrial	seminars, workshops	seminars, workshops	conferences, training	seminars, training, exhibits
	Commercial	seminars, workshops	seminars, workshops	multimedia, conferences, training	seminars, training
	Residential	media	tri-media	multimedia, conferences, training	tri-media

4. Recent EE Action Plans and Measures: by Economy

Australia

- ❑ Released *National Strategy for Energy Efficiency* in July 2009 to accelerate EE improvements for households and businesses over the next 10 years
- ❑ Energy Labelling and Minimum Energy Performance Standards to be expanded to include more products
- ❑ Building code EE house ratings to be strengthened

Brunei Darussalam

- ❑ Public Awareness Campaign
- ❑ Supply and Demand-Side Conservation

Canada

- ❑ ecoEnergy Efficiency - information, training, and retrofit assistance over 2007-2011, with an allocation of over CDN \$675 million
- ❑ ecoENERGY Technology - provides CDN \$230 million over five years for R&D

Chile

- ❑ Developing and implementing energy efficiency policy and programs through the *National Energy Efficiency Program* (PPEE)
- ❑ Action Plan on Energy Efficiency 2010-2020 (under development)
- ❑ Energy Efficiency Standards Action Plan (under development)

China

- ❑ Set targets for energy intensity improvements and energy conservation objective responsibility system: "one-vote veto" assessment
- ❑ Outlined several measures to improve energy efficiency (through administrative, legal and economic means such as: 1000-Enterprise implementation plan of energy conservation action, financial incentive funds for energy efficiency technological transformation projects, elimination of outdated and inefficient productive capacity)
- ❑ Energy conservation law revision, promulgation and implementation

Hong Kong, China

- ❑ Building Energy Codes
- ❑ Mandatory Energy Efficiency Labelling Scheme (issuance of labels for 2,580 appliances)

Indonesia

- ❑ Guidelines for energy savings in commercial buildings, government office buildings, households, industry and transport sectors
- ❑ Public-private partnership in energy audit and EE&C measures
- ❑ Energy labelling and energy efficiency standards (being developed)

4. Recent EE Action Plans and Measures: by Economy

Japan

- ❑ Amendment of Energy Conservation Law (2008)
 - ❑ Site base registration >> Enterprise base registration (more than 1500KLoe)
 - ❑ New major targets: truck carriers, chain stores, restaurants, hotels etc
- ❑ Amendment of Top Runner Program (Mandatory MEPS for 21 kinds of major vehicles and appliances)
 - ❑ LCD, plasma TV, DVD recorders, rice cookers, microwave ovens, trucks and buses were added in 2007
 - ❑ Gasoline fueling vehicle efficiency had new target (18.4km/L by 2015) in 2007

Korea

- ❑ National Energy Basic Plan (2008-2030) – Reduce Energy Intensity by 46% up to 2030
- ❑ Rational Energy Utilisation Basic Plan (2008-2012) - USD18.3 billion spending during the plan period

Malaysia

- ❑ Implementation of demonstration projects for energy efficiency improvement in industry and commercial sectors
- ❑ Efficient Management of Electrical Energy
- ❑ Green Building Index

Mexico

- ❑ National Strategy for the Energy Transition and the Sustainable Energy Use
- ❑ Special Program for the Renewable Energy Use
- ❑ Electrical Energy Saving Trust Fund (FIDE)
- ❑ Electric Sectorial Energy Saving Program (PAESE)

New Zealand

- ❑ Announced intention to review and update the New Zealand Energy Efficiency and Conservation Strategy in August 2009
- ❑ Energy Labelling and Minimum Energy Performance Standards to be expanded to include new products
- ❑ Vehicle Fuel Labelling

Papua New Guinea

Peru

- ❑ Law for the Promotion of the Energy Efficiency Use (Law N° 27345)
- ❑ Peru Save Energy (Perú Ahorra Energía -PAE) Program
- ❑ Referential Plan of Energy Efficiency Use 2009-2018
- ❑ Guidelines of Minimum Energy Efficiency Standards (MEPS) and labelling

4. Recent EE Action Plans and Measures: by Economy

Philippines

- Promotion of energy efficiency and conservation measures through National Energy Efficiency and Conservation Program (NEECP)
- Fuel conservation and efficiency in road transportation program

Russia

- Upgrades of the existing legislation framework and new federal targeted programs on EE and energy saving to be adopted by the end of 2009
- Mandatory building codes (including thermal performance audits) and labelling standards targeting improvements in EE and energy saving
- Recent policies to relax state control over energy prices help create real economic incentives to improve EE of the Russian economy

Singapore

- Singapore Certified Energy Manager (SCEM); ESCO accreditation scheme
- Advanced energy audit and financing mechanism
- Energy Smart Building and Green Mark building labelling system

Chinese Taipei

- Energy Management Law
- Minimum Energy Performance Standards for appliances and lighting
- Fuel Efficiency Standards for automobiles

Thailand

- Implementation of public awareness campaigns, create incentives
- Set up standards and labelling for energy-consuming equipment and material
- Energy Conservation Law

United States

- Corporate average fuel economy standards will increase efficiency by about 40% by 2020 (relative to 2007)
- Recover Act provided more than \$10 billion for energy efficiency programs

Viet Nam

- Viet Nam National Energy Efficiency Program 2006-2015 (VNNEEP)
- Preparation for ratification of incentives, rebates, and penalties (EE&C Law and related Regulations)
- Support from the World Bank for energy efficiency improvement program in electricity supply infrastructure including DSM programs.
- Support from UNDP for promotion of EE&C in small and medium enterprises

5. Conclusion & Way Forward

- Energy efficiency improvements will help APEC economies to chart *new pathways* for secure and sustainable development.
- To achieve improvements in energy intensity, the challenge will be to encourage investment in energy efficiency – i.e. investing in more efficient processes, appliances and goods.

5. Conclusion & Way Forward

- To achieve the 2007 aspirational goal, a *flexible arrangement* that recognises diverse approaches, and supports practical actions and regional co-operation among APEC economies is important.
- This compendium is a *tool to facilitate information sharing*, through the compilation of the *actions and measures* of APEC economies to reduce energy intensity.

5. Conclusion & Way Forward

- Some similar *strategies* were identified, including:
 - development of *EE policy and capacity building*;
 - *awareness raising and dissemination of information*;
 - promotion of good *energy management practices*; and
 - facilitation of *EE financing*.
- Some *high performance EE practices* have emerged such as:
 - *EE goals and strategies* for overall and sectors;
 - *compliance, monitoring, enforcement and evaluation* of energy efficiency measures; and
 - measures for increasing *investment* in energy efficiency.
- As well as some areas for improvement:
 - need for EE improvement in *transport sector*
 - enhancement of *private sector participation*

5. Conclusion & Way Forward

- We respect the individual circumstances of each APEC economy in setting a *path*, *overall goal* and/or *sectoral goal* to achieve the 2030 aspirational goal.
- The compendium has identified significant *gaps* in existing policies that have the potential to enhance EE improvement in APEC economies.
- All economies need a high degree of *political will* and *support*.

5. Conclusion & Way Forward

“There is no scenario for putting global energy consumption on a sustainable path that does not show a major contribution from energy efficiency - predominantly in end use”

(Nine Energy Policies Imperatives, G8 Summit, 2009)



**Thank you
for your attention!**

5. Conclusion & Way Forward

(We may skip this part at this stage and report it in a higher level !!)

- APEC economies should continue to assess their energy efficiency performance. *Regional co-operation* should be urgently strengthened to assist in identifying emerging issues and future areas for *action* to achieve the shared aspirational goal.
- A lesson learnt from the compendium is that widespread promotion of *highly efficient energy technologies* and *best practices* and *adoption of policies* to improve energy efficiency would effectively restrain demand without sacrificing productivity and growth.
- Increased *dialogues*, *capacity building*, *networking* and *information sharing* among APEC economies is highly recommended to further co-operation on EE.