



Energy Efficiency Standards and Labeling in Asia

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Presentation Content

- Quick Overview of S&L in Asia (within APEC region)
- Energy Efficiency S& L Program Harmonization in Asia



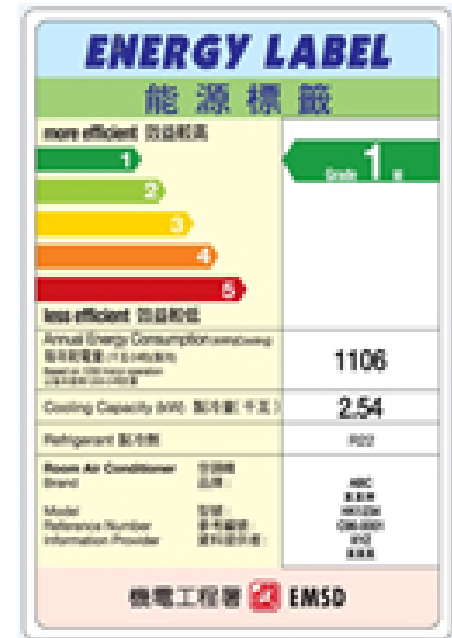
EE S&L in Brunei Darussalam

- Currently, no energy efficiency standard and mandatory label exists in Brunei Darussalam.
- Energy labeling for domestic appliances in Brunei Darussalam is at the preliminary stage, and will be implemented on a voluntary basis (with a focus on air-conditioners). It has been proposed that efforts will be extended to refrigerators, water heaters, and other electrical products at a later stage.



EE S&L in Hong Kong, China: EE Standard and Mandatory Label

- HK introduced a Mandatory EE Labeling Scheme (MEELS) through the Energy Efficiency (Labeling of Products) Ordinance enacted on 9 May 2008.
- MEELS covers room air conditioners, refrigerating appliances and compact fluorescent lamps, washing machines and dehumidifiers, and commenced on 19 March 2010 with an 18-month grace period
- A Code of Practice on Energy Labeling of Products has been issued to provide practical guidance and technical details with respect to the requirements under the Ordinance.



Energy Label



EE S&L in Hong Kong, China: Voluntary EE Labeling Scheme

- Hong Kong runs a Voluntary Energy Efficiency Labeling Scheme covering 18 types of household appliances and office equipment as well as for petrol-powered vehicles. The voluntary scheme has two kinds of energy labels.
 - **The grading-type energy labels** apply to room coolers, household refrigeration appliances, washing machines, electric storage water heaters and electric clothes dryers.
 - **The recognition-type energy labels** apply to other appliances and equipments including non-integrated type compact fluorescent lamps, television sets, liquid crystal display (LCD) monitors, domestic instantaneous gas water heaters, electronic ballasts, computers, etc.



EE S&L in Hong Kong, China: Voluntary EE Labeling Scheme

ENERGY LABEL
能源標籤

Brand 牌子	ABC 某某牌
Model 型號	HK1234
Annual Energy Consumption * kWh/yr 每年耗電量 * 千瓦时	364
Energy Efficiency Grade* 能源效益級別	2
Washing Machine Category * 洗衣機類別	1
Washing Capacity (kg) 洗衣量 (公斤)	5
Water Consumption (litre) 耗水量 (公升)	72
EEL Registration Number 能源標籤登記號碼	W 97-0001

* The data are provided according to the Hong Kong Energy Efficiency Labelling Scheme for Washing Machines administered by the Electrical and Mechanical Services Department (EMSD), Government of the Hong Kong Special Administrative Region. The registration record can be found at the EMSD website at www.emsd.gov.hk.

資料根據香港特別行政區政府機電工程署推行的香港洗衣機能源效益標籤計劃的規定列出。有關詳情可查閱網址 www.emsd.gov.hk。

機電工程署 EMSD

Grading-type Energy Label

ENERGY LABEL
能源標籤

機電工程署 EMSD

Recognition-Type Energy Label (Verification Label)

The Hong Kong Energy Efficiency Labelling Scheme is administered by the Electrical and Mechanical Services Department (EMSD), Government of the Hong Kong Special Administrative Region. For more information, please visit the EMSD website at www.emsd.gov.hk.

香港特別行政區政府機電工程署負責推行能源效益標籤計劃。查詢詳情請查閱網址 www.emsd.gov.hk.

機電工程署 EMSD

Recognition-Type Energy Label (Information Label)



EE S&L in Indonesia: Voluntary Label

- In 2008, Indonesia launched a voluntary energy labeling program. CFLs were the first labeled product. According to its roadmap, the labeling program intends to cover televisions, refrigerators, air conditioners, ballasts, and washing machines in the next several years.





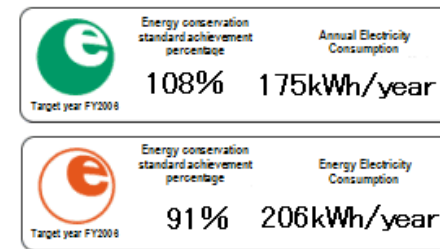
EE S&L in Indonesia: EE Standards and Mandatory Label

- Indonesia has some Minimum Energy Performance Standards (MEPs) for electrical appliances based on the Standard National Indonesia (SNI) and other technical standards on energy performance testing standards (EPTS) for electrical appliances.
- Additional energy efficiency standards on electrical appliances are in development. But to-date, Indonesia has not yet introduced mandatory energy labels.



EE S&L in Japan: Voluntary Label Programs

- The Japanese Industrial Standards (JIS) Committee on Electricity and Electronics approved the “Energy Saving Labeling program” in August 2000 which is voluntary program, covering ACs, fluorescent lights, televisions, electric refrigerators and freezers, water heaters, and computers, etc.
- **Japan has been implementing the ENERGY STAR program for office products since 1995**, including monitors and computers printers, faxes, scanners, copiers, MFDs, Digital Duplicators.



Voluntary Labeling Program-
Energy Saving Labeling Program
and ENERGY STAR



EE S&L in Japan: Voluntary Label Programs

- The Uniform energy saving label was established after the energy conservation law was revised in 2006, specifying the provision of information by retail stores to consumers as being encouraged.
- The label is applied to **five products** whose energy consumption levels are high and efficiencies significantly vary from product to product (namely, air conditioners, TV sets, refrigerators, and fluorescent lights).
- Since five star ratings are easy for consumers to understand and promotes product sales by retail stores, this label is used for products sold at most retailers.



Uniform Energy-Saving Label



EE S&L in Japan: EE Standards

- Japan does not have MEPS, instead it implements the “**Top Runner**” program, which is prescribed under the law concerning the rational use of energy (energy conservation law)
- In the Top Runner Program, the energy efficiency target is based on the product having the highest energy efficiency of all the products in the same group that are sold on the market and efforts are made to reach the target number by the time established for each type of product. Now the target products account for 23 products.
- The Program is a mandatory target energy efficiency performance program that will apply both to Japanese products and imported ones.

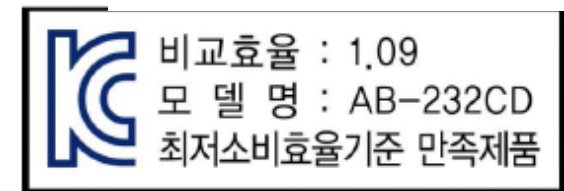


EE S&L in Korea: EE Standard and Mandatory Label

- Korea launched the Energy Efficiency Standards & Labeling Program (Included MEPS) in 1992.
- Presently the program covers 22 target products including refrigerators, air conditioners, etc. Appliances with the energy efficiency label are covered with Minimum Energy Performance Standard and energy efficiency ratio (EER).



Energy Efficiency Label for Refrigerator



Energy Efficiency Label for Fluorescent Lamps Ballasts



EE S&L in Korea: Voluntary Label

- Korea has adopted the High-Efficiency Appliance Certification Program since 1996.
- There are 41 target products including induction motors, boilers, and lighting equipments.
- It is a voluntary certification scheme aiming to promote the High-efficiency Appliance and initiative market.



에너지절약

Voluntary Label for
Products satisfying
standby standard



고효율기자재



High-efficiency
Appliance Label and
Certification



EE S&L in Korea: EE Standard and Mandatory Label

- Korea has been running another energy efficiency program, E-Standby Program, since 1999. The program aims to reduce standby power of electronic appliances and office equipment.
- 20 e-Standby Power Program Target products. Since August 28, 2008, seven products have been changed from a voluntary reporting scheme to a mandatory reporting scheme.
- The products that do not satisfy the standby power specification are subject to mandatory indication of “Warning Label.”



Mandatory Warning Label for products failing standby standard



EE S&L in Malaysia

- Malaysia has been considering Minimum Energy Performance Standards and mandatory labeling for appliances.
- Currently MEPS have been developed for ballasts.
- Malaysia has adopted voluntary labels for air conditioners, refrigerators, lighting, and televisions.



Voluntary Labeling Program-
Comparative and Endorsement
Label for Refrigerator



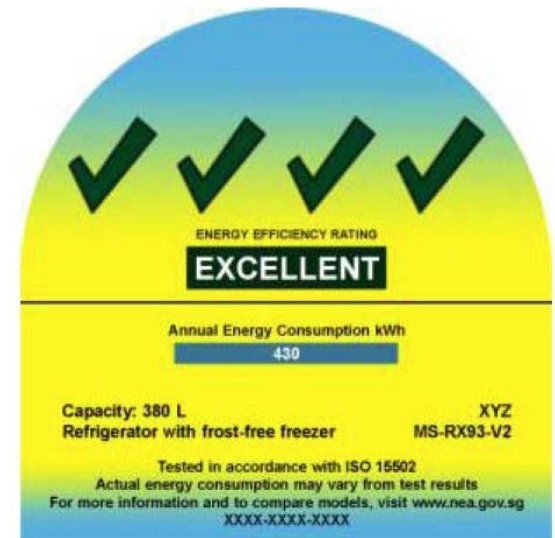
EE S&L in Singapore: Voluntary Label

- The voluntary labeling scheme, Singapore Green Labelling Scheme (SGLS), was launched in May 1992. But no energy performance information is shown on the Green Label.
- In 2002, Singapore launched a new voluntary comparative label, the “Energy Labelling Scheme,” under the umbrella of the SGLS, which covers two categories of electrical appliances (refrigerators and air-conditioners).
- Currently, the criterion SGL 029 - 030 for domestic refrigerators and air-conditioners are no longer endorsed for their energy efficiency under the SGLS. xEssentially, there is no voluntary energy efficiency labeling scheme in Singapore, although the assessment criterion under the SGLS does include energy efficiency requirements



EE S&L in Singapore: EE Standard and Mandatory Label

- Since 1 January 2008 a “Mandatory Energy Labelling Scheme” was introduced for domestic refrigerators and air conditioners. The Scheme was extended to domestic clothes dryers in Apr 2009.
- The Mandatory Energy Labelling scheme is administered by the National Environment Agency (NEA) and covered household air-conditioners, refrigerators and clothes dryers and is supported by the National Climate Change Committee (NCCC).



- Mandatory Energy Labeling Scheme



EE S&L in Chinese Taipei: Voluntary Label

- Energy Conservation Labeling Program is initiated in December 2001, which is a government-supported voluntary endorsement label for energy efficiency products.
- Currently, the program covers 28 product categories including ACs, refrigerators, TVs, fluorescence lamps, clothes washers & dryers, fluorescent lamps with embedded ballast, monitors, instantaneous gas water heaters, electric storage tank water heaters, electric pots, exit lights and emergency direction lights, luminaires, compact fluorescent lamps, and other products.
- 4,360 products with 260 brands have been labeled and available on the Energy Label website.

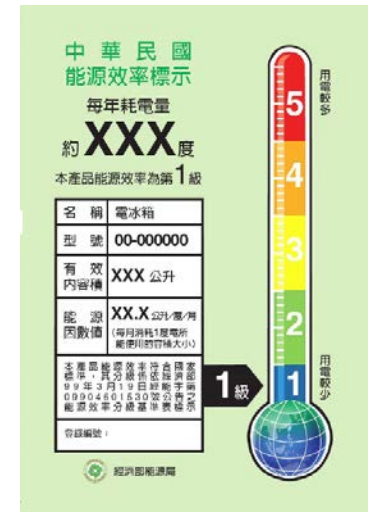


Voluntary Energy Conservation
Label Program



EE S&L in Chinese Taipei: EE Standard and Mandatory Label

- Chinese Taipei has introduced (MEPS) for appliances and lighting covering air conditioners, water chillers, refrigerators, fluorescent lamps, etc.
- Chinese Taipei respectively promulgated Requirements on Labeling and Inspection of the Energy Consumption and Energy Efficiency Rating for Room ACs in March 19, 2010 and the Requirements on Labeling and Inspection of Energy Consumption and Energy Efficiency Rating for Refrigerator/Freezer Products in March 22, 2010.
- The energy efficiency rating labels for self-ballasted fluorescent lamps, fluorescent lamps, conducted air conditioners, and compact fluorescent lamps are scheduled to be effective in several years.



Energy Efficiency Rating Label



Energy Efficiency Rating Logo displayed in the product catalogs



EE S&L in Thailand: Voluntary Label

- Two organizations are responsible for labeling programs, the Electricity Generating Authority of Thailand (EGAT) and the Department of Alternative Energy Development and Efficiency (DEDE). Both are sub divisions under the Ministry of Energy.
 - EGAT has been conducting an energy labeling program since 1994. At present, EGAT is promoting 12 appliances, a variety of equipment items, and Standby Power for televisions and monitors.
 - In addition, DEDE has been conducting an energy labeling program for non-electric products, such as LPG stoves, VSD, and glazing and insulation since 2007.



Voluntary Label for electric products



Voluntary Label for non-electric products



EE S&L in Thailand: EE Standards and Mandatory Label

- Thailand is currently targeting development of MEPS for 50, and HEPS for 54, different appliances, machines, and equipments.
- Thailand has the mandatory certification mark, which is operated by Thai Industrial Standards Institute.

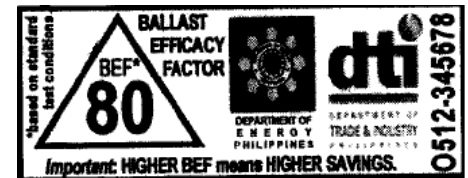


Mandatory
Certification Mark

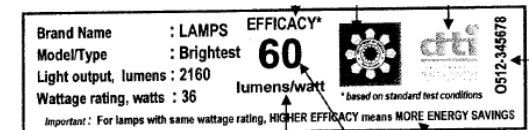


EE S&L in Philippines: EE Standard and Mandatory Label

- Philippines has MEPS for products including ACs, refrigerators and freezers, double-capped FLs and CFLs.
- Mandatory Energy Efficiency Labeling is applied to non-ducted ACs, refrigerators and freezers, and lightings.
- National standards on EE and labeling requirements for HID lamps, luminaires and incandescent lamps for domestic and similar general lighting purposes have been developed but not implemented.



Energy label for electronic ballast



Energy label for single-capped FLs



EE S&L in Vietnam

- Vietnam has not enforced mandatory standards and labeling programs. After the Law of Energy Conservation is approved, mandatory measures are expected to be gradually applied.
- Vietnam has voluntary labels for refrigerators, ACs, lamps, ballasts, and water heaters.
- Under the Vietnam Energy-Efficient Public Lighting (VEEPL) project, energy efficiency standards and labeling programs for ballasts for fluorescent lamps, tubular fluorescent lamps, high-pressure sodium vapor lamps, CFL, and electronic ballasts for fluorescent lamps have been developed.



Energy Efficiency S& L Programs Harmonization in Asia



Key Findings on S&L in Asia (within APEC region)

Recent Research on S&L programs in APEC region conducted by ICF shows:

- Both mandatory and voluntary approaches are used to address energy efficiency across various product categories.
- More developed economies have more robust S&L programs.
- Harmonization of EE standards presents many technical obstacles. Complete harmonization requires harmonization of test procedures, product scope and definition, key performance characteristics, and energy levels which suggest many technical obstacles.



Key Findings on S&L in Asia (within APEC region)

- ENERGY STAR voluntary labels are used by some Asian countries/regions.
- Some countries/regions refer to or adopt international test standards which suggests harmonization potential for test standards within these countries/regions.
- Some countries/regions' domestic energy policies support energy standard harmonization.



Challenges for Harmonization

- Policy support for a deliberate, long-term process of engagement on harmonization
- Language and cultural barriers that can prevent easy communication, or the ability to collaborate effectively, even when goals may be aligned.
- Reluctance to change existing standards and test methods to align with other countries
- Need for ongoing project teams with technical, management, and international expertise to be in place in each country



Thank You!

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