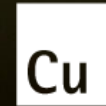




EU  
SWITCH  
Asia



International Copper  
Association Southeast Asia  
Copper Alliance

# ASEAN Standards Harmonization Initiative for Energy Efficiency



SE ASIA Region Roundtable on Energy  
Efficiency Policy Recommendations  
Jakarta, December 11-12, 2013



สถาบันไฟฟ้าและอิเล็กทรอนิกส์  
ELECTRICAL AND ELECTRONICS INSTITUTE



# Program Objectives



Reduction in the electricity consumption from the residential sector

Reduced emissions of greenhouse gases

Removal of non-tariff barriers to trade within ASEAN; enhance regional market integration

## Increase market share of high efficiency air-conditioners

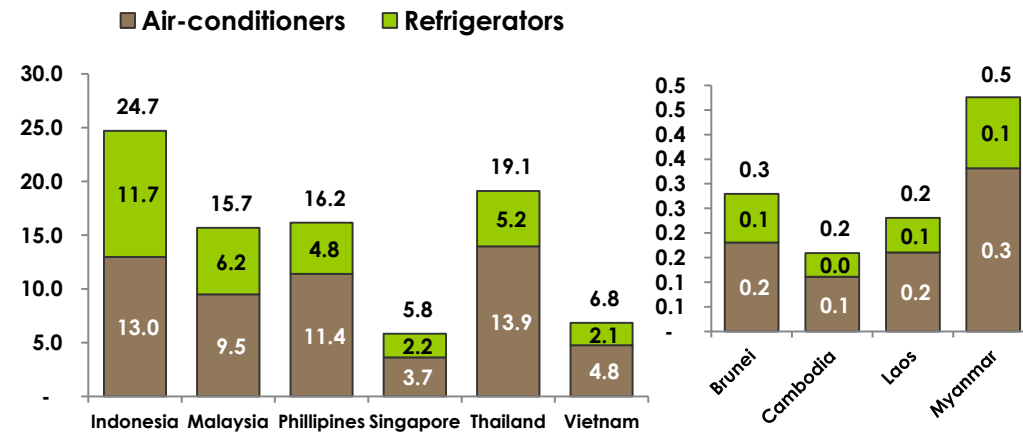
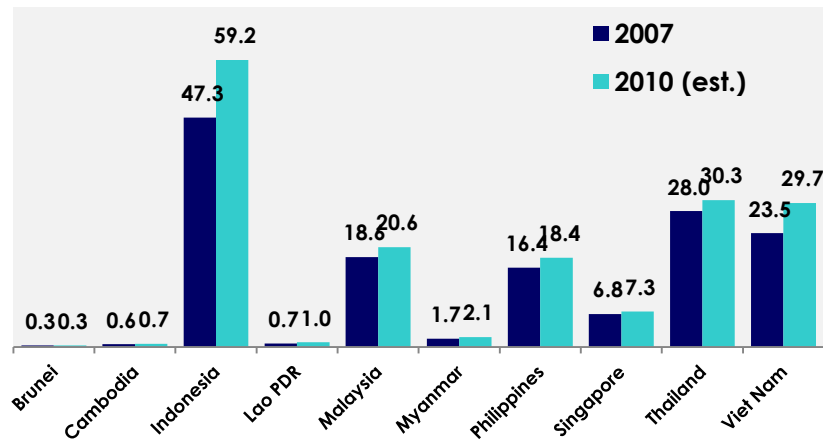
- Harmonize test methods and energy efficiency evaluation standards
- Harmonize Minimum Energy Performance Standards (MEPS)
- Change consumer purchasing attitudes

# Rationale



Estimated HH Annual Electricity Consumption in ASEAN – 2007 (TWh)

Estimated HH Annual Electricity Consumption by Air-conditioners and Refrigerators – 2010 (TWh)



- Household electricity consumption in ASEAN was estimated at 144,038 GWh in 2007 and is expected to continue growing rapidly in the coming years.
- Indonesia, Malaysia, Philippines, Thailand and Vietnam contributed for majority of the region's HH electricity consumption. Countries such as Vietnam and Indonesia have recorded the fastest growth in total consumption in recent years.
- Air-Conditioners is the major source for electricity consumption for households in most countries.
  - According to the various countries' statistical offices, air-conditioners are estimated to account for about 50% or more of the total HH electricity consumption in Singapore, Brunei, Philippines and Thailand.

Source: UNEP/ICA 2010

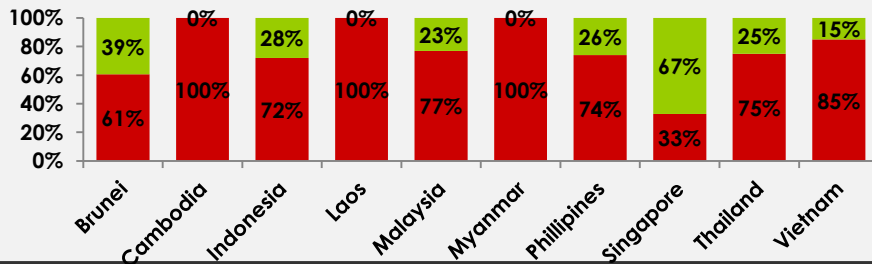
## Huge energy saving potential due to low penetration rate of higher efficient ACs

Scenario 1: Harmonization using China's new MEPS (EER cut-off at 3.2)

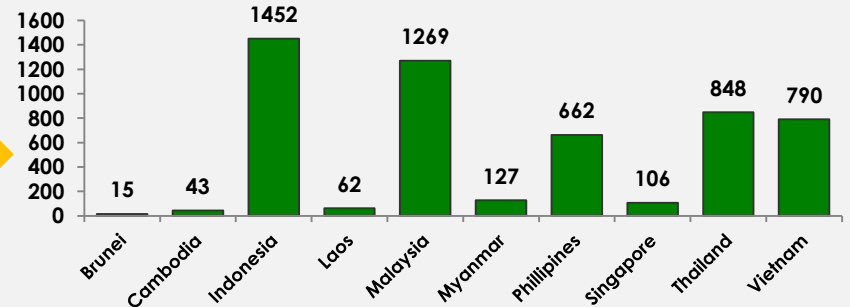
**Est. Technical energy savings: 5,373 GWh**

### Air-conditioners' electricity consumption - 2010

■ Appliances below MEPS cut-off    ■ Appliances that meet MEPS cut-off



### Est. technical energy savings from harmonization (GWh)



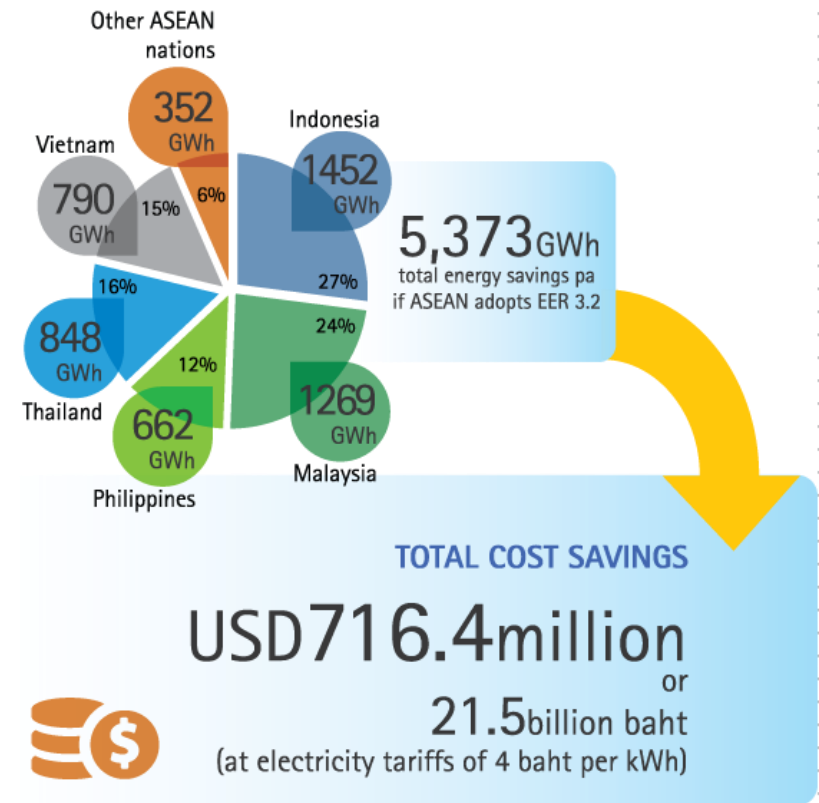
Scenario 2: Harmonization using current PH & TH's MEPS (EER cut-off at 2.8)

**Est. Technical energy savings: 1,928 GWh**

- **ASEAN Economic Community:** momentum to harmonize standards to remove non-tariff barriers to trade

# Huge Energy Saving Potential

- Total energy savings in ASEAN per annum amount to 5,373 GWh
- Assuming 4 baht per kWh tariff, total energy savings is 21.5 billion baht



# Program design

## Establish the ASEAN SHINE, with Country Chapters

WP1

### Market Pull mechanism

WP3

Develop regional policy roadmap

WP4

Develop national policy roadmaps

Consumer awareness campaigns

WP7

Increased demand for higher efficient ACs

### Market Push mechanism

WP2

Harmonize ASEAN standards for testing methods

WP5

Build capacity of testing labs

WP6

Build capacity of AC manufacturers

Increase supply of higher efficient ACs on the market

# Logical Framework

2013

2014

2015

2016

WP1

The ASEAN-SHINE is established and its sustainability is ensured allowing activities to continue in the future and harmonization of EE standards for other appliances.

WP2

The standards for testing methods and evaluation standards related to the energy performance of ACs are harmonized in ASEAN

WP3

A regional policy roadmap for MEPS and HEPS is adopted at the ASEAN level

WP4

National policy roadmaps for implementation and increase of MEPS are developed

WP5

Capacity building for testing laboratories on the new testing and evaluation methods

WP6

Capacity building for local AC manufacturers

WP7

Consumers education and awareness

**WP1: ASEAN SHINE established with country chapters**

**WP2: ASEAN countries already agreed on ASEAN harmonized standards for testing methods (ISO 5151:2010)**

**WP3: Regional policy roadmap work started (UNEP/CLASP/ICA)**



# An EU SWITCH Asia Programme



**Sponsor:** European Union (SWITCH Asia), Grant: 1,749,099 EUR

**Program duration:** 2013 - 2016

**Program Lead:** Copper Alliance (European Copper Institute & International Copper Association SEA)

**Technical partner:** UNEP

## Country Partners:

- Electrical and Electronics Institute (Thailand)
- SIRIM QAS International (Malaysia)
- Research Center for Energy and Environment (Vietnam)
- Integrated Institute of Electrical Engineers (Philippines)

## Associates:

- 10 ASEAN ministries in charge of energy (EE&C SSN Focal Points)
- Underwriters Laboratories
- CLASP

# Thank you

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