

# Current Situation and Challenges in Energy Efficiency S & L Policy Development in Thailand

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- 1. Thailand's Energy Situation & Energy Efficiency Plans**
  - 2. EE Standard and Labelling Measures in Thailand**
  - 3. Labelling & Promotion**
  - 4. EE Testing Laboratory Network**
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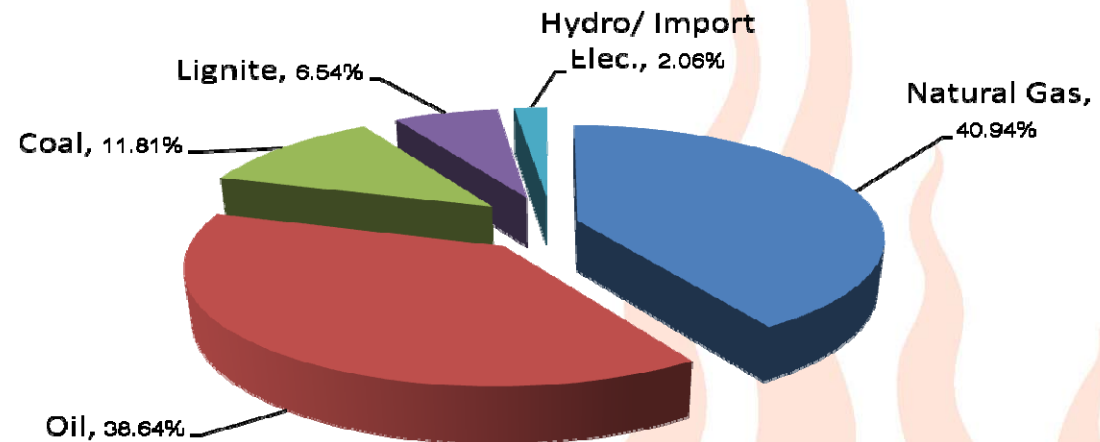
# Thailand's Energy Situation & Energy Efficiency Plans

# Energy Consumption in 2009

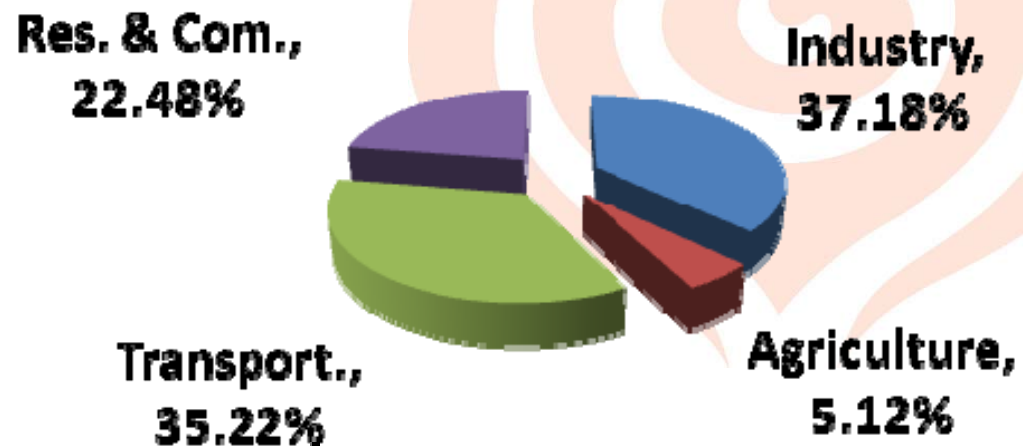
IEEJ: February 2011

In 2009, Energy Expenses 47 billion USD (import 58%)  
Total Commercial Energy Use 1.656 million barrels (oil equivalent) per day

Commercial Energy Consumption by fuel



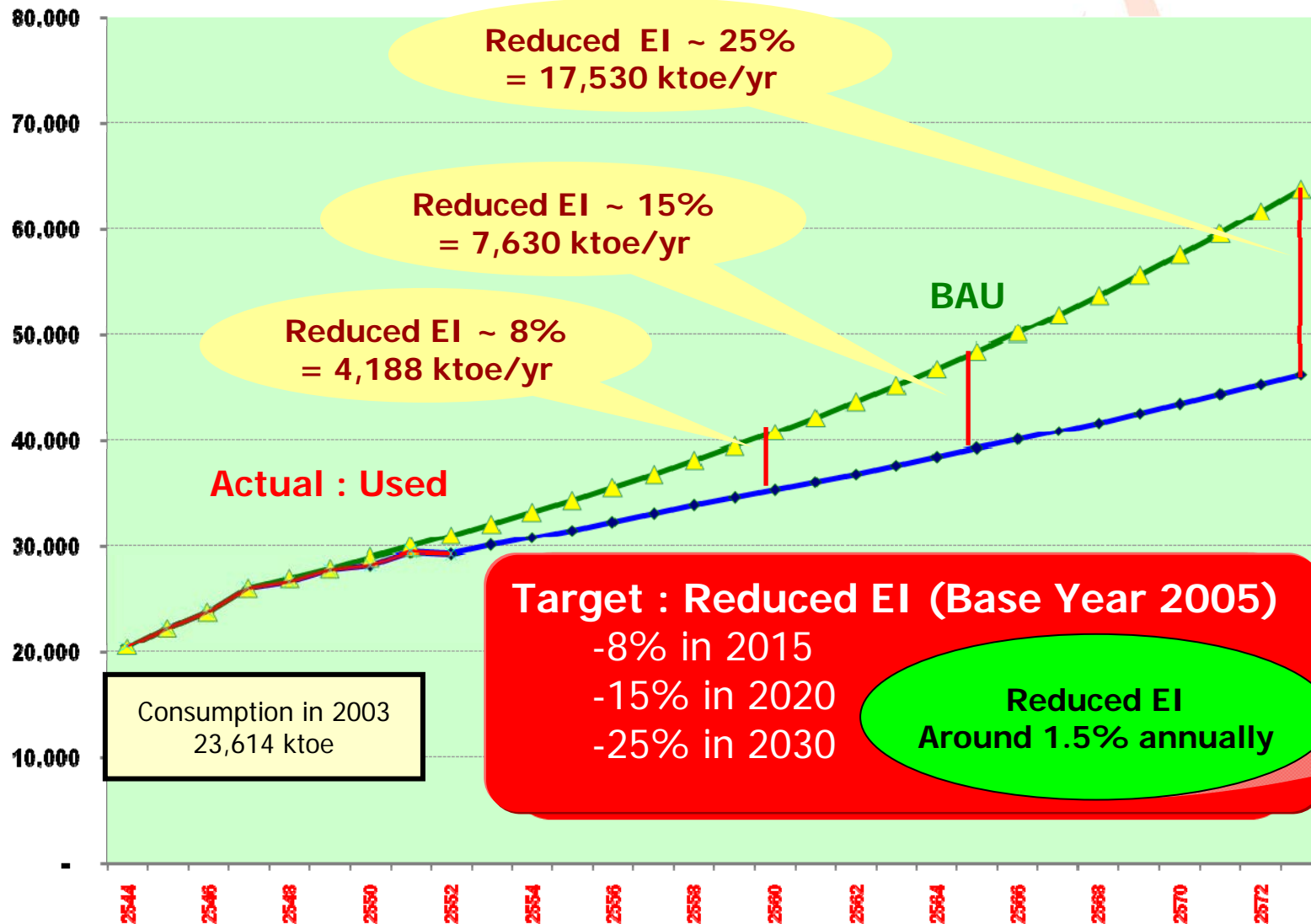
Energy Use by sector



# EE Plans and Targets

## Industrial and Commercial Sectors

Energy Consumption (KTOE/yr)





# 2

## EE Standard and Labelling Measures in Thailand

# Energy Conservation Promotion (ECP) Act

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- ECP Act was issued in 1992.
- ECP Act B.E. 2550 (2007) (Issue NO.2) has been effective since June 2008.

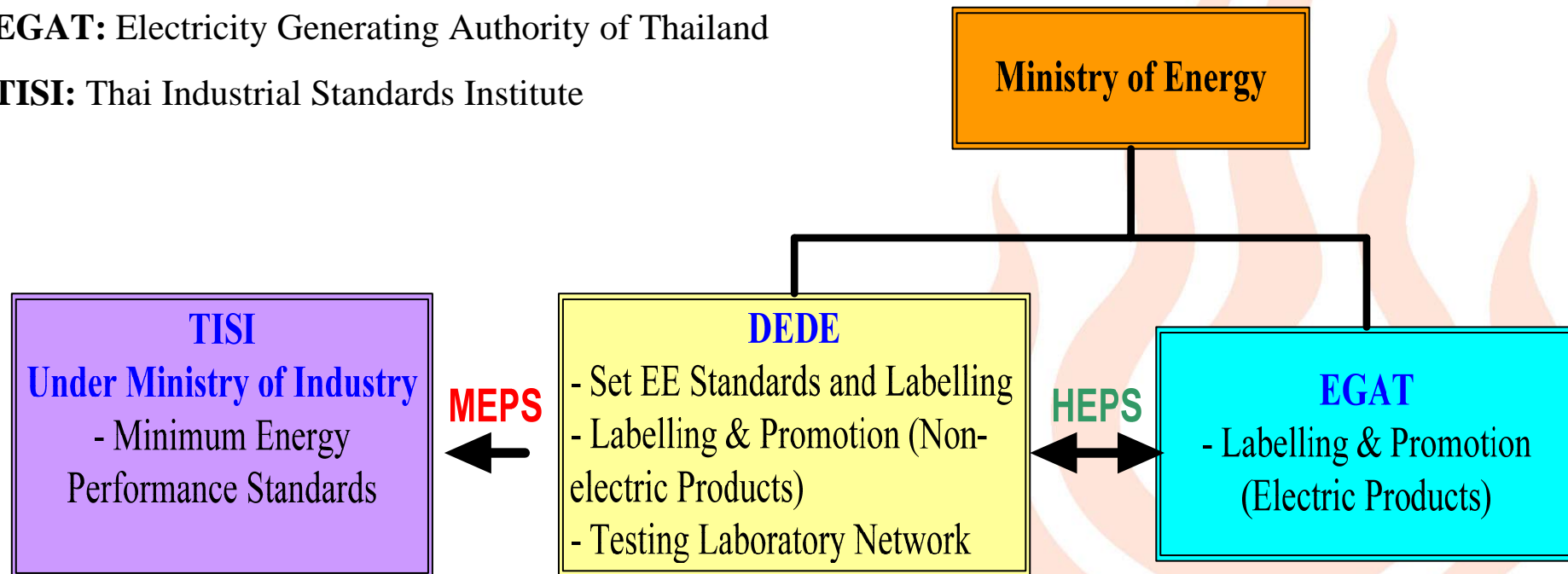
# Thailand Energy Efficiency S&L Structure

## Abbreviations

**DEDE:** Department of Alternative Energy Development and Efficiency

**EGAT:** Electricity Generating Authority of Thailand

**TISI:** Thai Industrial Standards Institute





# Energy Efficiency S & L Policy

- Increase energy efficiency in machinery, equipment, and to promote the use of energy efficient materials
- Eliminate very low energy efficient products

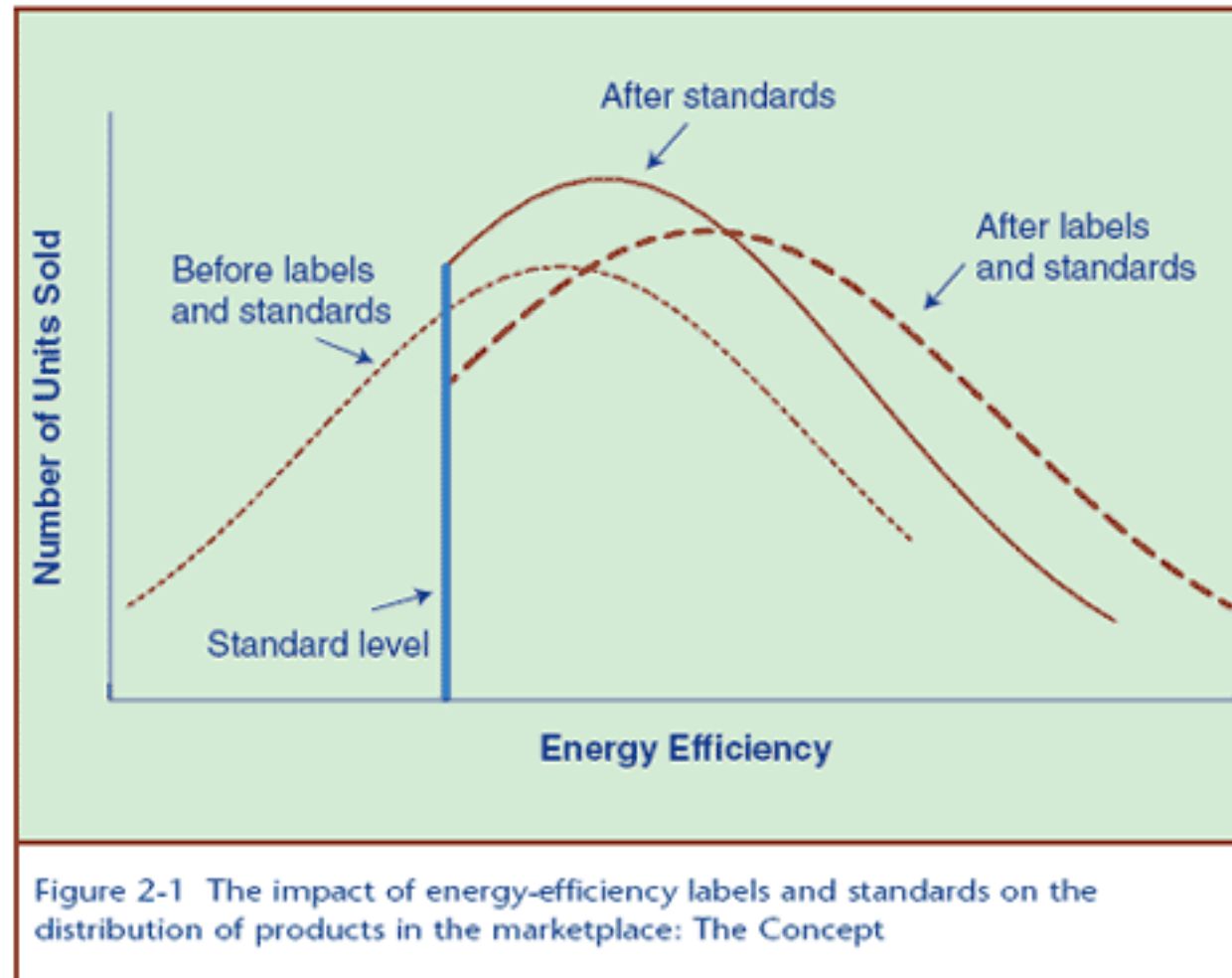
# MEPS & HEPS Criteria

- **MEPS** → 3 % low efficiency products fail
- **HEPS** → 20 % high efficiency products pass

**Note:** The percentage of MEPS and HEPS can be varied depending on consensus



Standards shift the distribution of energy-efficient models of products sold in the market upward by eliminating inefficient models and establishing a baseline for programs that provide incentives for "beating the standard." Labels shift the distribution of energy-efficient models upward by providing information that allows consumers to make rational decisions and by stimulating manufacturers to design products that achieve higher ratings than the minimum standard.



Source: CLASP

# Framework of EES&L Measures

## MEPS: Minimum Energy Performance Standards

- Both voluntary and mandatory program
- Collaboration between DEDE and TISI
- Standards are set up by DEDE, but they are regulated by TISI.



voluntary certification mark



mandatory certification mark

## HEPS: High Energy Performance Standard

- Voluntary program
- Collaboration between DEDE and EGAT
- Standards are set up by DEDE, and labelling programs are responsible by DEDE and EGAT



## Roadmap of HEPS & MEPS between 2007 and 2011 by DEDE

- MEPS → 50 products
- HEPS → 54 products

Current Status	
MEPS → 6 products	HEPS → 8 products
Draft MEPS → 16 products	Draft HEPS → 27 products

**11 products of draft MEPS and HEPS have been studying.**



# Labelling and Promotion



# Labelling for Electric Products

Energy Consumption  
(kWh/year)

Efficiency  
(BTU/hr/Watt)

EGAT : Electricity  
Generating Authority  
of Thailand



Ministry of Energy

# Labelling for Non-electric Products

The image shows a yellow and green energy saving label for a gas water heater. The label features a large white number '5' inside a red circle, surrounded by colorful curved lines. Below this, the text 'energy saving' is written in green. The Thai text 'ประหยัดพลังงาน ประสิทธิภาพสูง' (Energy saving, High efficiency) is also present. At the bottom, the product name 'เตาหุงต้มในครัวเรือนใช้กับก๊าซปิโตรเลียมเหลว' (Household gas water heater) and the efficiency value 'ค่าประสิทธิภาพเชิงความร้อนร้อยละ 53' (Thermal efficiency value 53%) are shown. The label is annotated with arrows pointing to various parts: 'Authority' points to the Ministry of Energy logo, 'Name of Product' points to the product name, 'Number 5 is shown the highest efficiency mark' points to the number 5, 'Energy Saving High Efficiency' points to the Thai text, and 'Percentage of Efficiency Value' points to the 53% value.

Authority

Name of Product

energy saving

ประหยัดพลังงาน ประสิทธิภาพสูง

กระทรวงพลังงาน  
MINISTRY OF ENERGY

เตาหุงต้มในครัวเรือนใช้กับก๊าซปิโตรเลียมเหลว  
ค่าประสิทธิภาพเชิงความร้อนร้อยละ 53

Number 5 is shown the highest efficiency mark

Energy Saving High Efficiency

Percentage of Efficiency Value





The product certification schemes of TISI consist of  
2 types with different certification marks.



**voluntary certification mark**



**mandatory certification mark**

**Thai Industrial Standards  
Institute (TISI) [www.tisi.go.th](http://www.tisi.go.th)**

# Labelling Schemes for Appliances

1. Refrigerator (1994)	8. T5 (2009)
2. Air conditioner (1995)	9. Electronic Ballast (2009)
3. Compact Fluorescent Lamp (1996)	10. Double-oscillating Fan (2009)
4. Electromagnetic Ballast (1998)	11. T5 Luminaire (2010)
5. Electric Fan (2001)	12. Exhaust Fan (2010)
6. Automatic Rice Cooker (2003)	13. Standby 1 Watt – Television (2010)
7. Lighting Luminaire (2003)	14. Standby 1 Watt – Monitor (2010)

# Labelling Schemes for Non-electric Products

1. LPG Stove

2. Variable Speed Drive (VSD)

3. Glazing

4. Insulator



## **Promotional Campaigns**

- **Advertising in media**
- **Public relation between consumers and strategic partners (government agencies, producers etc.)**
- **Attitude Creation Program  
(The Green Learning Room in School)**
- **Tax Incentive Program**



## Promotional Campaigns



**Advertising &  
Public Relation**

**The Green Learning  
Room , Activities  
in school**





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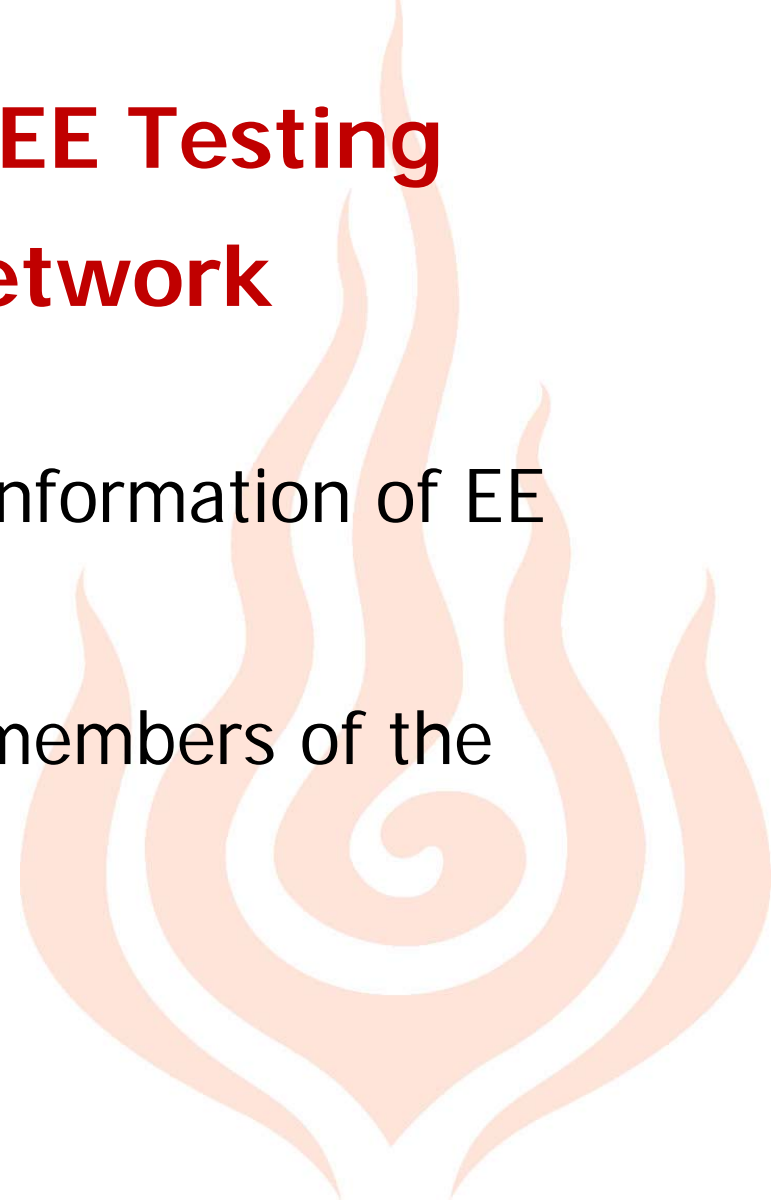
# EE Testing Laboratory Network





# The objectives of EE Testing Laboratory Network

- to centralize and contribute information of EE Testing Laboratory Network
- to interconnection between members of the network





# Accreditation requirement according to laboratory type

Type	Laboratory Organization	Accreditation Requirement
1	Government Organization	TIS – 17025 or TISI – R – TL - 01
2	Private Organization	TIS - 17025

**Note:** TIS – 17025 is equivalent to ISO/IEC 17025

## Laboratories for 8 Ministerial Regulations

Products	No.	Organization
1. Air-conditioner	2	<ol style="list-style-type: none"> <li>1. Electrical and Electronics Institute</li> <li>2. Bitwise (Thailand) Co., Ltd.</li> </ol>
2. Refrigerator	3	<ol style="list-style-type: none"> <li>1. Electrical and Electronics Institute</li> <li>2. TÜV SÜD PSB (Thailand) Ltd.</li> <li>3. Intertek Testing Service (Thailand) Ltd.</li> </ol>
3. Electric fan	1	<ol style="list-style-type: none"> <li>1. Electrical and Electronics Institute</li> </ol>
4. Chiller	-	In the process of testing result acceptance from producers
5. Glazing	-	Spectrophotometer lab of KMUTT will be certified by TISI-R-TL-01 for glazing.
6. Electric water heater	-	In the process of finding certified laboratory
7. Electric rice cooker	1	<ol style="list-style-type: none"> <li>1. TÜV SÜD PSB (Thailand) Ltd.</li> </ol>
8. Electric thermal pot	1	<ol style="list-style-type: none"> <li>1. TÜV SÜD PSB (Thailand) Ltd.</li> </ol>

## THE TESTING LABORATORY FOR

ELECTRIC FAN



&

REFRIGERATOR



# Website

Windows Internet Explorer window showing a website for the Ministry of Energy (กระทรวงพลังงาน).

Address bar: <http://ee.dede.go.th/labnetwork/th/product/index.php>

Navigation menu:
 


- หน้าหลัก
- เกี่ยวกับโครงการ
- ข้อมูลหน่วยทดสอบ
- ผลิตภัณฑ์ในร่างกฎกระทรวง
- สมัครเข้าร่วมเครือข่าย
- ถาม - ตอบ
- ติดต่อเรา

Left sidebar:
 

- สมาชิก: Username:  Password:  เข้าสู่ระบบ
- ค้นหา:  --- ชื่อห้องปฏิบัติการ --- GO
- ผลิตภัณฑ์ในร่างกฎกระทรวง: --- เลือกผลิตภัณฑ์ ---
- มาตรฐานที่เกี่ยวข้อง: --- มาตรฐานผลิตภัณฑ์ ---


Main content area:
 

## ผลิตภัณฑ์ในร่างกฎกระทรวง



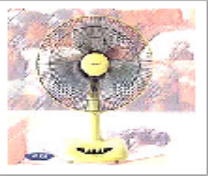
ตู้เย็นสำหรับใช้ในที...

ประกาศกฎกระทรวง  
ประกาศกรมเรื่องวิธิก...




เครื่องปรับอากาศสำหรับ...

ประกาศกฎกระทรวง  
ประกาศกรมเรื่องวิธิก...




พัดลมไฟฟ้ากระแสสลับ ...


ประกาศกฎกระทรวง

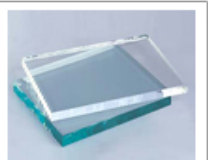



หม้อหุงข้าวไฟฟ้า ( E...

ประกาศกฎกระทรวง  
ประกาศกรมเรื่องวิธิก...









Footer: กระทรวงพลังงาน MINISTRY OF ENERGY

Windows taskbar: 6. น้อย แสต..., โครงการเคริ..., General\_Dir..., :: ระบบงานร..., untitled - Paint, EN, 8:36 AM



Department of Alternative  
Energy Development and Efficiency  
**MINISTRY OF ENERGY**

IEEJ:February 2011

Thank you  
**[www.dede.go.th](http://www.dede.go.th)**

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Contact : [report@tky.iej.or.jp](mailto:report@tky.iej.or.jp)