# Running an Energy Performance Testing Laboratory

By

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## Abstract :

This presentation would show some details concerning the running an energy performance testing laboratory, and would be limited only to non-technical problems.

The main object is to demonstrate that laboratory could not be neither developed to international standard, nor to keep it in well maintained conditions with the “Low Service Fee”.

# Back ground:

**1990 :** TISI has set up "Calorimeter Room" with financial support from JICA

**1995 :** EGAT has launched energy labelling program for Room-Air Conditioner and Refrigerator

**Nov.1999 :** Test Center, Electrical and Electronic Institute has started running "Calorimeter - Room"

# Test Center, Electrical and Electronic Institute #1

EEI Test Center

# Calorimeter - Room

# Test Center / Electrical and Electronic Institute

## Energy Performance Testing Laboratory

**Type : Calorimeter - Room**

**Investment :** USD.1,000,000 excl. building and land

**Quality management :** ISO/ IEC 17025

**Accreditation :** Expect within 2001

**Standard :** 1. ISO/R859-1968 (Testing and Rating Room Air Conditioners)

2. JIS B8615-1984

**Capacity :** Up to 31,000 Btu/hr.

# Test Center / Electrical and Electronic Institute

## Energy Performance Testing Laboratory

**Type : Calorimeter - Room**

**Up grade :**

1. Control unit using PLC technology and Wonder Ware Software (completed within May.2001)
2. Capacity up to 40,944 Btu/hr ; max. (Completed within July 2001)

**Personnel :** 2 - Engineers

**Work hour :** 2 - Shift a day

2 - Unit a day

**Client :** Local manufacturers and importers

**Service charge :** USD. 290 / Unit

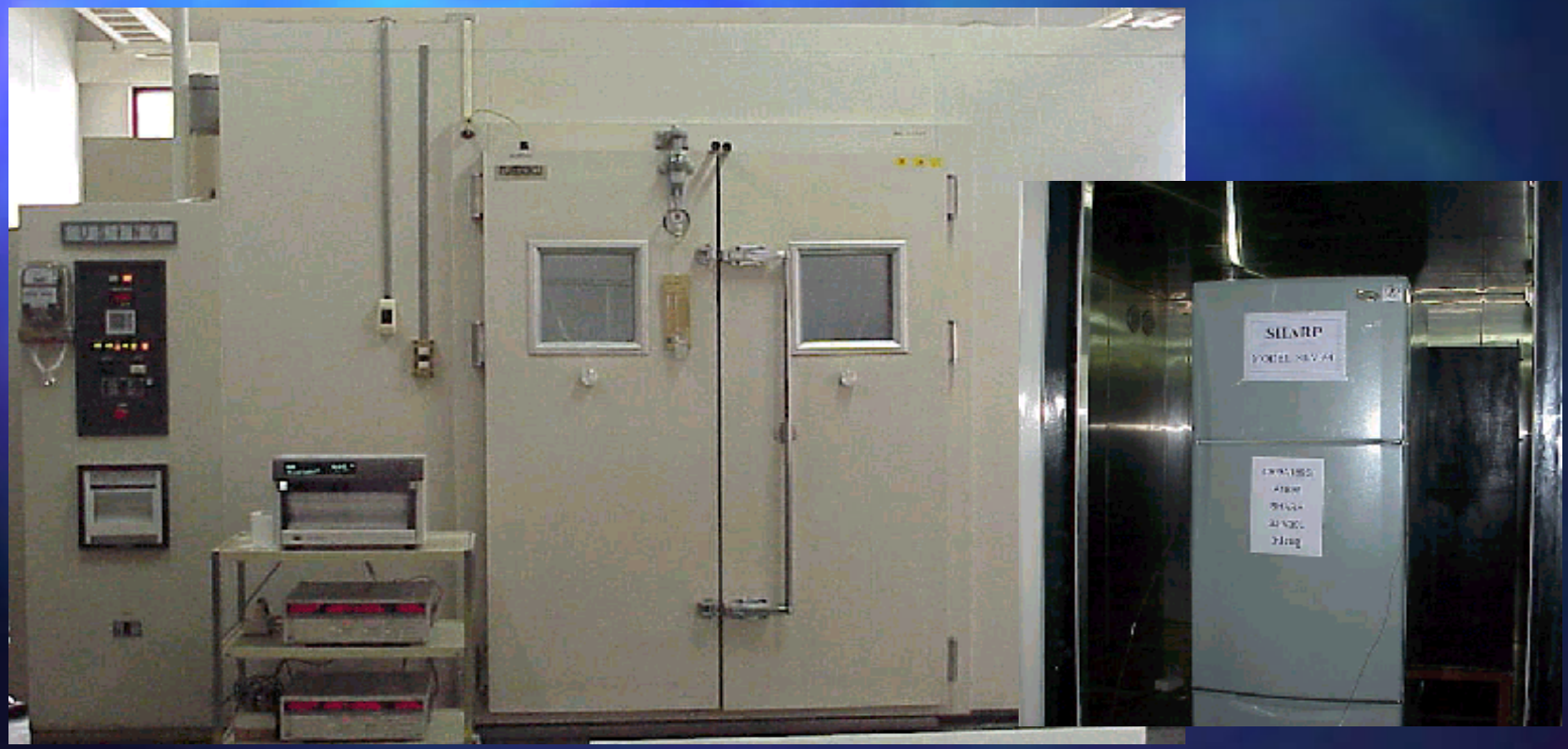
**Last year service :** 265 Units

**Revenue :** USD.76,850 / Year

What do you think about this figure?

# Walk-In Chamber

3.00 m x 4.00 m x 2.20 m
temp. -30 - 60° C
humidity 30 - 95% RH



# Test Center/Electrical and Electronic Institute

## Energy Performance Testing Laboratory

**Walk - in Chamber** 3.00 m X 4.00 m X 2.20 m

**Quality management** : ISO/ IEC 17025

**Accreditation** : Expect within 2001

**Standard** : ISO 7371-1985

**Capacity** : 3 - Unit

**Up grade** : non

**Personnel** : 1 - Engineer

# Test Center / Electrical and Electronic Institute

## Energy Performance Testing Laboratory

| | |
|---|---|
| **Walk - in Chamber** | 3.00 m X 4.00 m X 2.20 m |
| **Work hour :** | 1 - Shift a day |
| | 1 - Unit a day |
| **Client :** | Local manufacturers and importers |
| **Service charge :** | USD. 170 |
| **Last year service :** | 85 Units |
| **Revenue :** | USD.14,450 / Year |

What do you think about this figure?

# In Thailand : How many ?

Energy test on Air-Conditioners : 4

2 : Factory's Lab

1 : Univ.'s Lab
(no - accredited, no standard)

1 : Test Center's Lab
(3rd Party Lab, ISO standard, ISO/IEC17025 management)

Energy test on Refrigerators : 6

5 : Factory's Lab (no accredited)

1 : Test Center's Lab
(3rd Party Lab, ISO standard, ISO/IEC17025 management)

# Running ’s problems :

1. Technical problems:

   - Calibration : for more than 20 equipment
   - maintenance : for more than 30 parts
   - Source of spare part

2. Financial problems:

   - Operation cost

     ie. Calibration and spare part uncontrollable high!!

   - Service charge

     must be low!! And lower than operation cost!!

Running an Energy Performance Testing Laboratory in THAILAND.

Fund must be provided for future development

Otherwise..... Good Bye in one next day.

...Thank you...

EEI Test Center