SEMINAR ON THE PROMOTION OF ENERGY EFFICIENCY AND CONSERVATION (PROMEEC) – INDUSTRIES/BUILDINGS

Development of a Database for Industries/Buildings in Southeast Asia

DATABASE

- Definition
  - A collection of information organized in such a way that a computer program can quickly select desired pieces of data. It is an electronic filing system

PROMEEC-DATABASE

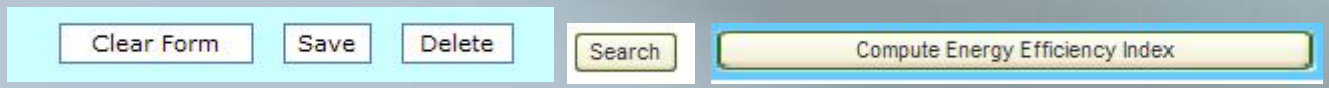
- Tool to determine the ideal energy consumption in Industry and buildings
- To find the best state of energy consumption in Industry and buildings
- To monitor energy conservation progress based on numerical data

BUILDING/INDUSTRY ENERGY MANAGEMENT DATABASE

- Purpose
  - Provide standardized database for Energy Management
- Objective
  - In-house database for individual Industry/buildings to monitor energy consumption

INDUSTRY/BUILDING ENERGY MANAGEMENT DATABASE cont..

- Functionality
  - Saving/storing data
  - Editing/Modifying
  - Deletion
  - Searching of data
  - Computation of the Building Energy Efficiency Index (BEEI)



- Future Functionality
  - Provide analysis through line graphs and pie chart

BASIC DATA AND STRUCTURE

- Sources
  - Energy Audit Questionnaire of ECCJ
  - Comments/suggestions of building owners, stakeholders and Focal Points
  - Available sample data given by the buildings/Industry during energy audit

ENERGY MANAGEMENT DATABASE – INDIVIDUAL INDUSTRY/BUILDINGS

- Contents
  - General Information
  - Energy Consumption (monthly/yearly)
  - Energy Consumption (hourly)
  - Retrofitting and Operation
  - Energy Efficiency and Conservation Measures
  - Energy Management

ENERGY MANAGEMENT DATABASE – cont..

- General Information

Building Name : Search (or leave blank and fill out the boxes below)

Building Name :

Building: General Information

Country: Please Select

Owner: | Completion Date (dd/mm/yyyy):

City: | Location/Address:

Building Usage: | % of each function (for complex building) :

- Office
- Hotel
- Hospital
- School
- Retail and Shopping Center
- Others (please specify):

Parking Area (to be included in TGA) : | Total Gross Area (TGA):

Total Air conditioned Area:

Total Number of Storeys:

Above ground : Storeys | Basement: Storeys

ENERGY MANAGEMENT DATABASE – cont..

- Energy Consumption (monthly/yearly)

Building: Energy Consumption

Year:

Month	Electric Power Consumption (kWh/month)	Oil (l/month)	Gas (m^3/month)	Water (m^3/month)	Others
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
Total					
Heat content of fuels MJ/l, MJ/m^3, MJ/kg					

Equipment: Heat Source Capacity

Chiller Plant Capacity					COP
Turbo Chiller		kW		USRT	
Chiller Units		kW		USRT	
Package Unit		kW		USRT	
Others		kW		USRT	

Heating (Boiler) Plant Capacity					COP
Hot Water Boiler		kW		MJ/h	
Steam Boiler		kW		MJ/h	
Others		kW		MJ/h	

ENERGY MANAGEMENT DATABASE – cont..

- Retrofitting and Operation

Building: Retrofitting and Operation

Major Retrofitting

Year of Retrofitting:	Room Temperature : °C
Room Setting Humidity: %	Operation hours per week: h
Occupancy Ratio (Operation Ratio): %	

Details of Retrofitting: (You may enter up to 500 characters)

300 characters left

Office	Tenant Area		m^2
Office	Operation Ratio (%, year)	%	hours/year
Hotel	Number of Guest rooms		rooms
Hospital	No. of beds		beds
School	Number of Classrooms		rooms
Retail and Shopping Center	Tenant Area		m^2

Plant and Equipment: Electricity

Voltage of the receiving power: V	Total capacity of transformers : kVA

Plant and Equipment: Air conditioning

Air conditioning System	Please choose
Single duct System	○
Fan-coil System	○
VAV System	○
Package System	○
Others, please specify:	○

Total fan capacity of AC System: kW	Total chilled water pump capacity for AC : kW
Efficiency of the chiller : kW/ton	BAS, BEMS etc.: ○ Yes ○ No

ENERGY MANAGEMENT DATABASE – cont..

- Energy Consumption (hourly)

Building: Energy Consumption (Hourly Power Consumption)

Date (dd/mm/yyyy):

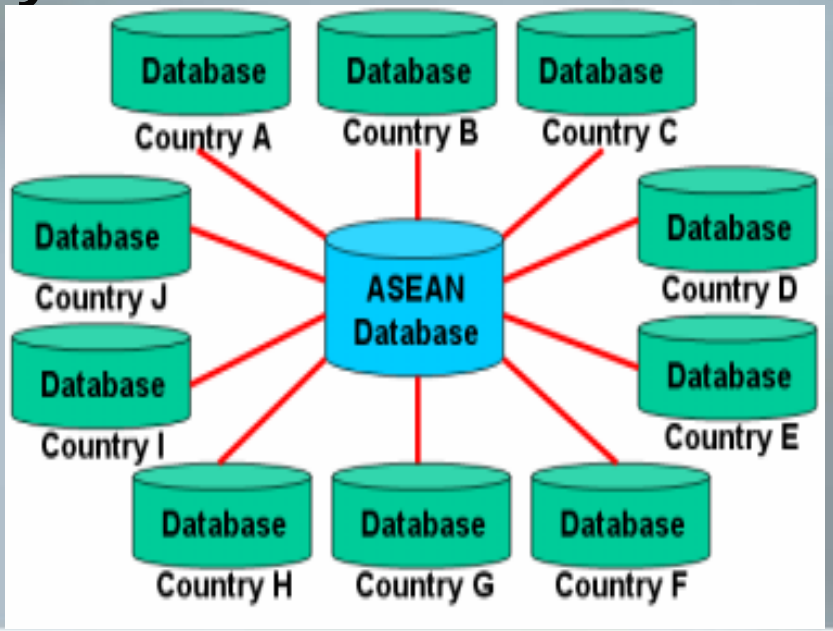
Time	kW	Time	kW
0		12	
1		13	
2		14	
3		15	
4		16	
5		17	
6		18	
7		19	
8		20	
9		21	
10		22	
11		23	

STEPS FOR DATABASE COMPLETION

- Collect comments and suggestions from Industry/building owners, stakeholders and key players
- Circulate the updated copy of the database for comments of the Focal Points
- Finalise the main contents, structure and layout of the database

FUTURE PLAN

- To have a regional database for ASEAN that will provide benchmarking among various buildings/Industry



Thank you for your kind attention.