

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)

Clear Form

Save

Delete

Search

Compute Energy Efficiency Index

■ 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 : <input type="text"/> <input type="button" value="Search"/> (or leave blank and fill out the boxes below)	
Building Name : <input type="text"/>	
Building: General Information	
Country: <input type="text"/> Please Select <input type="button" value="v"/>	
Owner: <input type="text"/>	Completion Date (dd/mm/yyyy): <input type="text"/> <input type="button" value="GO"/>
City: <input type="text"/>	Location/Address: <input type="text"/>
Building Usage: <input checked="" type="radio"/> Office <input type="radio"/> Hotel <input type="radio"/> Hospital <input type="radio"/> School <input type="radio"/> Retail and Shopping Center <input type="radio"/> Others (please specify): <input type="text"/>	% of each function (for complex building): <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Parking Area (to be included in TGA): <input type="text"/>	Total Gross Area (TGA): <input type="text"/>
Total Air conditioned Area: <input type="text"/>	
Total Number of Storeys:	
Above ground: <input type="text"/> Storeys	Basement: <input type="text"/> Storeys



ENERGY MANAGEMENT DATABASE – cont..

■ Energy Consumption (monthly/yearly)

Building: Energy Consumption

Year:

Month	Electric Power Consumption (kWh/month)	Oil (t/month)	Gas (m ³ /month)	Water (m ³ /month)	Others
January	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
February	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
March	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
April	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
May	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
June	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
July	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
August	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
September	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
October	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
November	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
December	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Total	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Heat content of fuels MJ/t, MJ/m ³ , MJ/kg	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Equipment: Heat Source Capacity

Chiller Plant Capacity				Heating (Boiler) Plant Capacity			
Turbo Chiller	<input type="text"/> kW	<input type="text"/> USRT	<input type="text"/> COP	Hot Water Boiler	<input type="text"/> kW	<input type="text"/> MJ/h	<input type="text"/> COP
Chiller Units	<input type="text"/> kW	<input type="text"/> USRT	<input type="text"/> COP	Steam Boiler	<input type="text"/> kW	<input type="text"/> MJ/h	<input type="text"/> COP
Package Unit	<input type="text"/> kW	<input type="text"/> USRT	<input type="text"/> COP	Others	<input type="text"/> kW	<input type="text"/> MJ/h	<input type="text"/> COP
Others	<input type="text"/> kW	<input type="text"/> USRT	<input type="text"/> COP				

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)

500 characters left

Office Tenant Area m²

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 m²

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 A/C System: kW Total chilled water pump capacity for A/C: 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): 

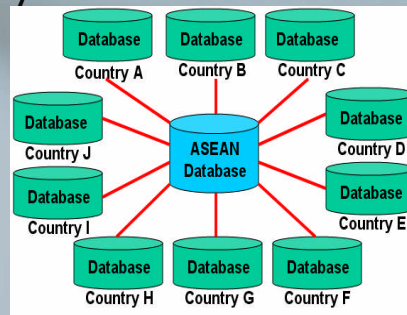
Time	kW	Time	kW
0	<input type="text"/>	12	<input type="text"/>
1	<input type="text"/>	13	<input type="text"/>
2	<input type="text"/>	14	<input type="text"/>
3	<input type="text"/>	15	<input type="text"/>
4	<input type="text"/>	16	<input type="text"/>
5	<input type="text"/>	17	<input type="text"/>
6	<input type="text"/>	18	<input type="text"/>
7	<input type="text"/>	19	<input type="text"/>
8	<input type="text"/>	20	<input type="text"/>
9	<input type="text"/>	21	<input type="text"/>
10	<input type="text"/>	22	<input type="text"/>
11	<input type="text"/>	23	<input type="text"/>

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.