Calculator: Building Energy Intensity Tool

http://www.acem.com.my/index.php?option=com_content&task=view&id=65&Itemid=1

Summary

The Building Energy Intensity Tool (BEIT) is a software tool meant to assess energy use in buildings and has been developed by the Association of Consulting Engineers Malaysia (ACEM). It enables calculation comparison between existing and improved design and has been developed specifically for use under the equatorial climatic conditions found in Malaysia.

Developers: Association of Consulting Engineers Malaysia (ACEM), Pertubuhan Akitek Malaysia (PAM)

Applicable sectors							Themes		
All Infrastructure	Buildings	Roads	Water	Energy	Transport	Construction	Materials	Ecology	Wastewater
							Potable Water	Carbon/GHG	Other

Countries	Malaysia	**Access**	Free to download
Compatibility with other tools	The BEIT calculator was developed to support the ACEM Green Building Index rating system.	**Guidance for users**	The BEIT software is not accompanied by any additional guidelines for its use.
Inputs & outputs	BEIT prompts the user to input information on the project and the recommended building. They are then requested for information on OTTV (heat gain from building walls and glazing), RTTV (heat gain from roof), ACMV (energy use due to air conditioning and mechanical ventilation), Lighting Power, Plug load and miscellaneous load and cost for both the baseline and the proposed building. The tool outputs the Energy Intensity Breakdown (kWh/m2/year) (from cooling energy, fan, lighting, plug load and miscellaneous load), the Cooling Load Breakdowns (kW), the total investment cost for the development and the payback in years. This information is displayed for both the baseline and the proposed building, along with the energy reduction achieved. The results displayed both graphically and in detail.	**Methodology**	BEIT is a software tool meant to assess energy use in buildings. BEIT makes comparison between two building scenarios, the baseline building and the proposed building. The baseline building represents the building as it is (or as currently designed), while the proposed building is the same building to be retrofitted (or to be enhanced in design). The software allows for calculation of OTTV, RTTV, lighting power, plug load, ACMV and miscellaneous loads (incl. elevators, escalators, hydraulic systems and facade lighting), to make predictions of energy savings that can be achieved for various new design and retrofit measures.
Database library	The software contains inbuilt calculations for processing input information.	**Data intensity & flexibility**	Data intensity is medium as there is limited guidance or suggested data to guide the user in the values they should use.

Note: "Free to download" does not necessarily imply that it is free for commercial use.