

Thesis Title	The Allocation Guide of Electricity Budget in Government Universities: KMUTT Case Study
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### Abstract

When Thailand was faced with problems of the economics crisis starting in the mid of 1997, it was necessary for the government to reduce the expenditures including the budget for the department of university affairs. Previously, the allocated budget for KMUTT was not adequate for the expenses. The lesser budget for KMUTT caused more problems to KMUTT in meeting the expenses, particularly, regarding to the budget for electrical energy usage. This thesis is intended to suggest ways to allocate the limited budget for various working facilities in King Mongkut's University of Technology Thonburi appropriately and impartially.

The objective of this thesis is to find energy consumption index for each type of room, so that they can be used as standard values to calculate for the allocation of budget for various working facilities. Rooms that are involved in this study are office work room, class room, private work room, joint work room, conference room, computer room, and toilet room and their energy consumption index are 31 kWh/m<sup>2</sup>/person/yr., 0.08 kWh/m<sup>2</sup>/hr., 163 kWh/m<sup>2</sup>/yr., 68 kWh/ m<sup>2</sup>/person/yr., 0.08 kWh/m<sup>2</sup>/hr., 143 kWh/m<sup>2</sup>/yr. and 130 kWh/room/yr., respectively. In finding electricity energy consumption index for each room, it necessary to find out electricity consumption of each equipment. These are air conditioner, photocopier, computer, printer, refrigerator, electric water flask and electric water cooler. Besides these rooms, energy consumption of elevators in the school of Energy and Materials Building was also studied. From the study, The result of this study for the elevators found out that the consumption

of electrical energy is 47.97 kWh/day (during a school term working days), 23.74 kWh/day (during school term Saturday-Sunday) and 39.07 kWh/day (during an off school term)

All these data are to fulfil the purpose of the allocation of electrical budget. Nevertheless, progresses also depend on electrical user behavior. All users such as teachers, officials, students in the KMUTT, should be cooperating with each other to save electricity energy. In fact, university management should give a clear energy policy and all users should follow this policy and instructions very seriously, continuously and follow up a result closely in order for the problem to be solved successfully.

**Keywords:** Allocation guild of electricity budget / Electrical energy management /

Electricity energy consumption index for each type of room / Energy consumption of air conditioner / Energy consumption in office / Energy consumption in private work room