

ABSTRACT

This project has studied on the energy conservation potential for small building by improving lighting system. This project is surveying of existing system of building in Case A: LCL Apartment and Case B: BTG Office and Warehouse then conducting analysis in terms of technical and non-technical aspect. The appropriate measures will be selected with each building for set saving target and plan for implementation.

Criteria for decision support on which measures should be implemented are existing system, engineering constraint, financial constraint and human and day-to-day work.

After the studying, LCL Apartment will get energy saving gain 155,313.47 kWh / Year and cost saving gain is 316,839.37 Bahts/Year. Investment cost of building is 838,522 Bahts. For BTG Office and Warehouse, energy saving gain is 346,980 kWh/Year and cost saving gain is 617,624 Bahts/Year. Investment cost of building is 1,230,152 Bahts. Building will get these gain by implemented the modification of existing system measure. Moreover, building will get energy saving gain and cost saving gain by the other measures also. The other measures are Lighting for Non-task Area, Daylighting Utilization, Lighting System Control and System Maintenance.

Also, this project is show the ideas of energy saving measures for apply with general building. The building manager or energy manager can use the consideration methods for analyze and implemented with his own building for achieve energy saving target and operation cost saving target.