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CONVENIENCE STORES IN BANGKOK. THESIS ADVISORS : CHIRAPOL SINTUNAWA, Ph.D.,
WADANYU NATHALANG, M.Arch., M.A.Ed., TANABOON SASIPANUDACH, M.Eng. 151 p.
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This study examines the energy saving potential of convenience stores in Bangkok. The illumination level of 93 stores from 6 company chains was measured at both day time (between 10.30 - 14.00 hrs) and night time (20.00 - 04.00 hrs).

The result from the study shows that the existing lighting systems of all the stores illuminated at levels higher than Commission International de l' Eclairage lighting standard at both day time and night time, 1,556.6 lux and 677.1 lux respectively. In addition, power consumption of these store was also higher than accepted standard, 31.6 watts per square meter (standard illumination and power consumption of convenience stores are 500 lux and 23 watts per square meter). Applying the non-investment energy saving scheme to these stores' lighting, these stores could reduce light bulb consumption by 41.0 percent and electricity consumption by 39.2 percent. About 1,346,955.0 baht per year could be saved on electricity bills with this scheme.

Applying the investment scheme to these stores through replacing existing light bulbs with the more energy efficient ones would reduce both number of light bulbs and electricity consumption of these stores. This scheme could reduce the number of light bulbs by 51.1 percent. It was also found that up to 49.7 percent of electricity consumption could be saved and 1,708,322.6 baht per year of electricity bill could be avoided. The investment in this scheme showed an IRR of 37.3 percent and a pay back period of 0.09 year.