

**UPGRADING THE ELECTRICAL POWER DISTRIBUTION SYSTEM OF
SILLIMAN UNIVERSITY**

A Special Problem Paper

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The School of Graduate Studies

Central Philippine University

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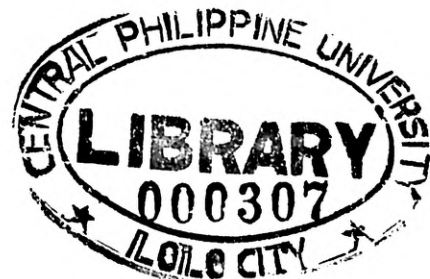
of the Requirement for the Degree

Master of Engineering

By

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ABSTRACT

The primary objective of this study was to upgrade the Electrical Distribution System of Silliman University. The upgrading was focused on the removal of the 1.5 MVA, 13.2 KV to 2,400 volts step down transformer from the existing system. This was done by determining the average daily electrical load of the Silliman University for seven consecutive days, energy losses of the 1.5 MVA transformers, average energy loss of the existing electrical distribution, proposal of a new electrical system for Silliman University and projected savings of proposed electrical distribution system. The existing SU Electrical Distribution System used redundant large capacity distribution transformers to step-down voltages from 13.2 Kilovolts NORECO II line to 2400 volts SU distribution lines that caused large amount of power losses and at the same time the existing electrical distribution lines constituted higher line losses. The total system's loss was large enough that rendered inefficient electricity distribution. Since the proposed Upgrading of Silliman University Electrical Distribution System showed a significant average monthly savings on its monthly electric bill that will be achieved thru the effective use of electric energy, upgrading the existing electrical distribution system is the best option to reduce the university's expenses in electricity.