

ABSTRACTION

Electrical energy is source of energy which is very important for Sekolah Tinggi Manajemen dan Bisnis Telkom (STMB) because it has an important part in running its activities. Utilization of electrical energy can be effective and vice versa. One aspect of utilization electrical energy, which is not productive, is utilization electrical energy beyond productive activity schedule which is caused by weakness of employees in STMB. Utilization electrical energy which is not productive can occur caused by careless or intentional factor. If there is more utilization electrical energy which is not productive then expense that is spent by STMB will increase too. Because of that condition, in this research writer construct economy electrical energy assist system which is able to execution based on scenario that is wanted by user towards consuming of electrical energy. Beside that, this system is capable to give information such as alarm, digital line electrical energy data according to a real time and historical. The title of this research is “Rancang Bangun Alat Bantu Sistem Penghematan Energi Listrik Berbasis Supervisory Control and Data Acquisition (SCADA)”.

In constructing this system, there are some cases which are done in solving problem above. It divides in 5 phases, i.e. beginning study phase, initialization phase, creative phase, testing and analyzing project phase, and conclusion and suggestion phase. Beginning study phase includes determination problem and aim that want to be reached, initialization phase to learn book and field study, continued by analyzing existing system and make model project in creative phase. After model system finishes to be built then the next process is testing phase and continued by analyzing system “Is the system that be built appropriate with first aim or not?” and “Is this system suitable to be implemented?” and the final is conclusion and suggestion phase.

This research divides in some chapters, i.e. Chapter I concerns with background, purpose of writing, benefit of research, and limitation of problem. Chapter II consists of literature study about Programmable Logic Controller (PLC), Human Machine Interface (HMI), Supervisory Control and Data Acquisition (SCADA), information and database system. Chapter III about making model that is conceptual from system which is created and formulating problem from this paper. Chapter IV as a main from discussion from this paper concerns with analyzing existing system and construction system that made and continued by analyzing system in Chapter V. The latest chapter, Chapter VI concerns with conclusion and suggestion from paper that be made.

From the result of research that be done, there is conclusion that implementing economy electrical energy assist system based on Supervisory Control and Data Acquisition (SCADA) will easier user in controlling and checking channel of electrical energy and Acquisition field data according to real time and historical.

Keyword: Electrical energy, scenario, PLC, HMI, SCADA