

# ***ANALYSIS OF THE EFFICIENCY OF ELECTRICAL ENERGY IN AN ELECTRO BUILDING USING A TIMER AND COLORING METHODS***

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## **Abstract**

*In general, the load on the electrical network is inductive loads such as electric motors, heaters, neon (which uses transformers), mercury lamps and others, so the electric load is mostly inductive loads that require reactive power. If this relative load is borne by the power plant, the current flowing in the network will also increase, which results in a decreased power factor and an increase in the voltage drop at the end of the line (to the consumer). In past research, to make efficient use of electrical energy in consumers is to install electrical energy saving equipment (energy servers) that are used both in the industrial, business / commercial and household sectors. The electrical energy saving equipment is a capacitor bank which is useful for injecting reactive power at points where voltage drops occur, so that a good voltage profile and smaller power losses are obtained. In this study, electrical energy savings were carried out in the electro-electric community by using the coloring method on each switch and the use of a timer on the socket, this study aims to make the electric power efficient in the Bengkalis State Polytechnic Electro building, which in the Bengkalis State Polytechnic Electro building is classified as wasteful in energy consumption. electricity. From the test results, the efficiency obtained was 1.27% reduction in the use of electrical energy in the Bengkalis State Polytechnic Electrical Building.*

*Key words: power efficiency, electricity, coloring method*