Electrical Energy Audit and Potential Energy Savings at the Kotaanyar Village Community Health Center (Puskesmas) Building, Subdistrict Kotaanyar

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ABSTRACT

Electrical energy conservation is needed to reduce the investment cost of power plants, so the government implements energy efficiency policies in buildings. Puskesmas Kotaanyar has high electricity consumption, especially from the use of air conditioning, so it needs energy optimization efforts. This study aims to analyze the IKE value, the suitability of lighting and air conditioning with SNI, and energy saving opportunities at Kotaanyar Health Center. This study used a quantitative method by collecting primary data in the form of room area, active power, light intensity, and temperature as well as secondary data, namely building data and electricity payments. Furthermore, IKE of each room was calculated and compared with the standard to analyze the potential for energy savings. The results of the study at Puskesmas Kotaanyar showed that energy consumption was still within standard limits, but the light intensity was low and the room temperature varied due to ventilation factors and less than optimal use of air conditioning, while saving efforts in air-conditioned rooms through adjusting air conditioning capacity and reducing usage time managed to save 785.2 kWh and reduce IKE to 11.26 kWh/m²/month so that it became more efficient.

Keywords: Energy Audit, Savings Opportunities, Kotaanyar Village Health Center