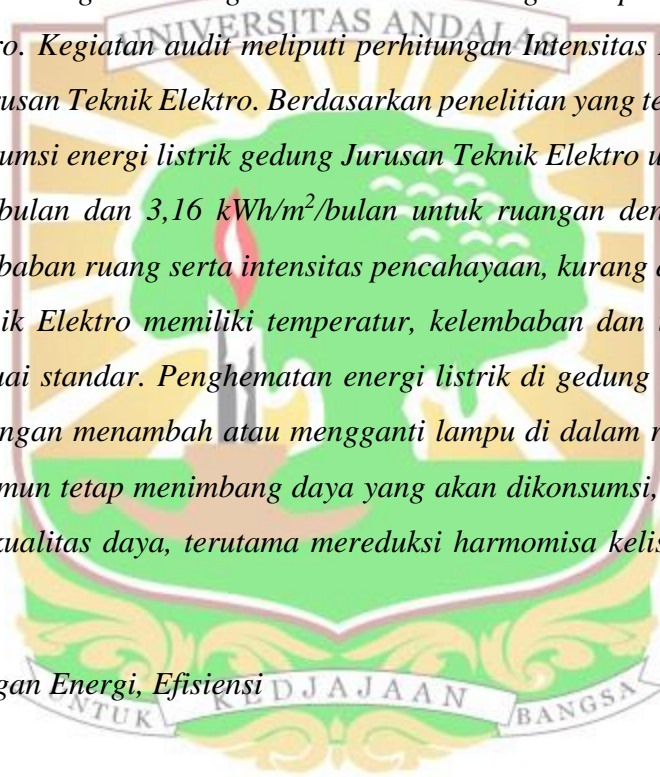


ABSTRAK

Peningkatan jumlah energi listrik yang terjual oleh perusahaan penyedia energi listrik menandakan adanya peningkatan konsumsi energi pada setiap gedung atau peningkatan jumlah konsumen listrik di Sumatera Barat tak terkecuali gedung-gedung di kampus Universitas Andalas, terutama di gedung Jurusan Teknik Elektro. Oleh karena itu, konsumsi energi listrik di Universitas Andalas perlu ditinjau ulang dalam kegiatan konservasi energi berupa audit energi di gedung Jurusan Teknik Elektro. Kegiatan audit meliputi perhitungan Intensitas Konsumsi Energi (IKE) listrik dari gedung Jurusan Teknik Elektro. Berdasarkan penelitian yang telah dilakukan diketahui bahwa intensitas konsumsi energi listrik gedung Jurusan Teknik Elektro untuk ruangan tanpa AC adalah 0,64 kWh/m²/bulan dan 3,16 kWh/m²/bulan untuk ruangan dengan AC. Ditinjau dari temperatur dan kelembaban ruang serta intensitas pencahayaan, kurang dari 50% ruangan pada gedung Jurusan Teknik Elektro memiliki temperatur, kelembaban dan intensitas pencahayaan ruang yang ideal sesuai standar. Penghematan energi listrik di gedung Jurusan Teknik Elektro dapat ditingkatkan dengan menambah atau mengganti lampu di dalam ruangan yang intensitas cahayanya kurang namun tetap menimbang daya yang akan dikonsumsi, memperbaiki penataan ruang, memperbaiki kualitas daya, terutama mereduksi harmonisa kelistrikan gedung Jurusan Teknik Elektro.

Kata Kunci: Perhitungan Energi, Efisiensi



ABSTRACT

The increasing amount of electricity sold by electric energy provider companies indicating an enhancement in energy consumption in every building or enhancement in number of electricity consumers in West Sumatra, no exception buildings on Andalas University, especially Electrical Engineering Department Buildings. Therefore, the electrical energy consumption on Andalas University need to be reviewed in the conservation of energy in the form of energy audits in Electrical Engineering Department buildings. Audit activity includes the calculation of Energy Consumption Intensity (IKE) of electricity from Electrical Engineering Department building. Based on the research that has been made known that the intensity of the electrical energy consumption of Electrical Engineering Department buildings for a room without air conditioning is 0.64 kWh/m²/month and 3.16 kWh/m²/month for a room with air conditioning. Judging from the temperature and humidity of the room and the lighting intensity, less than 50% space in the Electrical Engineering Department buildings has temperature, humidity and illumination intensity ideal space standard. Electrical energy savings in the Electrical Engineering Department building can be improved by adding or replacing the lights in the room that the light intensity but still weigh less power will be consumed, improve spatial planning, improve power quality, especially reducing electricity harmonic Electrical Engineering Department building.

Keywords: Calculation of Energy Efficiency

