



INTISARI

Audit energi merupakan langkah penting untuk mengetahui profil penggunaan energi serta menemukan peluang peningkatan efisiensi tanpa mengurangi kenyamanan dan kualitas layanan. Sektor bangunan, termasuk fasilitas pelayanan publik seperti puskesmas sehingga berpotensi besar untuk dilakukan penghematan. Berdasarkan Peraturan Wali Kota Surabaya Nomor 1 Tahun 2019 tentang Penghematan Pemakaian Energi Listrik dan Air, setiap instansi pemerintah diwajibkan menerapkan langkah-langkah efisiensi energi secara berkelanjutan. Penelitian ini dilakukan di Puskesmas Banyu Urip dengan tujuan mengetahui distribusi penggunaan energi, nilai Intensitas Konsumsi Energi (IKE), serta potensi penghematan energi listrik. Hasil analisis menunjukkan nilai IKE sebesar $3,71 \text{ kWh}/m^2/\text{bulan}$ dengan konsumsi terbesar berasal dari sistem pendingin udara. Melalui penerapan rekomendasi berupa penggantian lampu CFL menjadi LED, penyesuaian jumlah titik lampu, dan penggantian AC sesuai kebutuhan, diperoleh potensi penghematan sebesar $21.005 \text{ kWh}/\text{tahun}$ atau $17,62\%$ dari total konsumsi energi, dengan penghematan biaya mencapai Rp 30.346.258,- per tahun serta penurunan emisi Gas Rumah Kaca sebesar $17.854 \text{ kg CO}_2/\text{tahun}$, sejalan dengan upaya Pemerintah Kota Surabaya dalam mendorong pengelolaan energi yang efisien dan berkelanjutan.

Kata kunci: Audit Energi, Intensitas Konsumsi Energi, Penghematan Energi



ABSTRACT

Energy audits are an important step in determining energy usage profiles and identifying opportunities for efficiency improvements without compromising comfort and service quality. The building sector, including public service facilities such as health centers, has great potential for savings. Based on Surabaya Mayor Regulation No. 1 of 2019 concerning Electricity and Water Conservation, every government agency is required to implement sustainable energy efficiency measures. This study was conducted at the Banyu Urip Community Health Center with the aim of determining the distribution of energy use, the Energy Consumption Intensity (ECI) value, and the potential for electricity savings. The analysis results show an ECI value of 3.71 kWh/m²/month, with the largest consumption coming from the air conditioning system. Through the implementation of recommendations such as replacing CFL lamps with LED lamps, adjusting the number of light points, and replacing air conditioners as needed, a savings potential of 21,005 kWh/year or 17.62% of total energy consumption, with cost savings reaching IDR 30.346.258 per year and a reduction in greenhouse gas emissions of 17.854 kg CO₂/year, in line with the Surabaya City Government's efforts to promote efficient and sustainable energy management.

Key words: *Energy Audit, Energy Consumption Intensity (ECI), Energy Saving*