

ABSTRACT

HVAC (*HEATING, VENTILATION, AND AIR CONDITIONING*) SYSTEMS MANAGEMENT ON RECTORATE BUILDING AT THE UNIVERSITY OF LAMPUNG

By

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HVAC (Heating, Ventilation, and Air Conditioning) system is air conditioning system to adjust the comfort level of both the ambient temperature and air humidity. HVAC system in the Rectorate Building of Universitas Lampung (UNILA) still not good, because the use of AC (Air Conditioner) are less wise and not in accordance with standard usage and placement operations AC (Air Conditioner) is not standard, that causing energy consumption in the Rectorate Building of UNILA increase every month. Because that, research was need at Rectorate Building of UNILA through management of the HVAC system, to calculate electrical energy consumption that consumed for air conditioning system.

Energy Consumption Intensity (IKE) values obtained of 3.13 kWh/m² per month, this result is a highly efficient results according to Permen ESDM no.13 in 2012 is less than 8.5 kWh/m² per month. In addition to the comfort level of the results obtained average of 68.18% for humidity and 27.4°C for room temperature, this value has not reached the standards set by SNI 6390-2011 is 55% to 65 % for humidity and 24 °C to 27 °C for temperature. Cooling load is calculated using the method Total Equivalent Temperature Difference (TETD/TA) and the results obtained maximum load occurs at 16.00 or at 4 pm with a total load of sensible and latent is 1087062.53 btu/h. AC energy consumption in the Rectorate Building of UNILA is 761.4 kWh per day with a ratio of total building energy consumption by 1006.62 kWh per day. Overall, AC (Air Conditioner) Energy consumption accounted for 75.63% of total energy consumption in the Rectorate Building of UNILA.

Keywords : Cooling load, Rectorate Building of UNILA, Energy Consumption Intensity, HVAC systems