REDUCTION IN ENERGY CONSUMPTION AS AN OPTION FOR ACHIEVING IMPROVED THERMAL COMFORT IN RESIDENTIAL BUILDINGS IN UMUAHIA, NIGERIA

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ABSTRACT

Energy consumption increases exponentially with urbanization. More houses, shopping malls, transportation facilities, hospitals, schools, markets and Civic Centres are built to provide for socio economic needs of the people. The study area, Umuahia is an upcoming urban centre located in the south east of Nigeria. Its population is growing rapidly demanding services that would expend energy for light, water generation, supply and distribution, air conditioners, Laundry, and Leisure. Umuahia is firmly located in the subequatorial South Climatic zone. It records an average annual temperature of 35°C, with some months like, January, February and March exceeding the annual average. Humidity is high, at 98% especially during the rainy season. Given the above scenario, the study will spur interest in Architectural ecology hence, summing up the focus of the paper.

Keywords: Energy Consumption, Thermal Comfort and Residential Buildings, Architectural Ecology.