ABSTRACT

STUDY OF ENERGY SAVING IN CONVENTIONAL BUILDINGS USING EDGE BUILDING APPLICATIONS

Farah Aribah, 1).Surya Gunanta Tarigan, S.T., M.A., Ph.D. 2) Ar. Melania Lidwina Pandiangan, S.T., M.T., GP 3)

1) Student of the Architecture Study Program, Pembangunan Jaya University

2) Lecturer in the Architecture Study Program, Pembangunan Jaya University

3) Lecturer in the Architecture Study Program, Pembangunan Jaya University

Increasing the number of residents in an area has an impact on increasing the need for houses, especially in urban areas. In Indonesia, the housing sector is experiencing rapid development. However, this growth also has an impact on increasing energy use, especially electricity. Therefore, efforts are needed to achieve energy efficiency in conventional homes. This study aims to analyze the potential for energy savings in conventional homes using the EDGE Building application. The EDGE Building application is a platform that provides energy efficiency guidelines and standards in building design. Through this application, an analysis of conventional houses in Discovery Alton housing is carried out to evaluate the extent to which energy saving potential has been achieved based on energy efficiency standards in EDGE Building.

The research method used is a case study of conventional houses in Discovery Alton housing. The data collected includes the characteristics of the house, energy use, and the implementation of energy saving measures based on the EDGE Building standards.

The results of the study show that the energy saving potential of the Discovery Alton housing meets the energy efficiency standards of the EDGE Building. With the results of the percentage assessment showing energy efficiency of 51.85% in the Energy category, 32.29% in the Water category, and 12.59% in the Materials category. The results of this study can be a reference for housing developers, architects and homeowners to improve energy efficiency and reduce the environmental impact produced by conventional houses.

***Keywords**: Electric energy saving, conventional house, EDGE Building application, energyefficiency*