FUTURE PREDICTION OF CARBON DIOXIDE EMISSION IN TOKYO GIVEN BY SPREAD OF ZERO ENERGY APARTMENT HOUSES

Tomoya Okishio, Tsunoo Satomi and Hiroto Takaguchi
Graduate School of Creative Science and Engineering, Waseda University, Japan

ABSTRACT

Based on the Paris Agreement which entered into force in 2016, target to reduce 39% of carbon dioxide emission of residential sector over the 2013 level by 2030 was declared. To reach the target, one of the policies which Japanese government showed is Zero Energy Houses for detached houses. This research is aimed to show the prediction of carbon dioxide emission between 2013 and 2030. Firstly, following the fact that the number of apartment houses is increasing in Japan, the definition of Zero Energy Apartment Buildings is proposed. Secondly, the number of detached houses and apartment buildings which will be constructed and removed is calculated using multiple regression analysis. Lastly, it is predicted how carbon dioxide emission in Tokyo will be reduced by spread of Zero Energy Apartment Buildings in 2030.

Keywords: *Zero Energy House, Apartment House,* Building Regulation*,* Carbon Dioxide Emission, Future Prediction