

A Comparative Case Study of the Impact of Square and Yurt-Shape Buildings on Energy Efficiency

Authors : Valeriya Tyo, Serikbolat Yessengabulov

Abstract : Regions with extreme climate conditions such as Astana city require energy saving measures to increase the energy performance of buildings which are responsible for more than 40% of total energy consumption. Identification of optimal building geometry is one of the key factors to be considered. The architectural form of a building has the impact on space heating and cooling energy use, however, the interrelationship between the geometry and resultant energy use is not always readily apparent. This paper presents a comparative case study of two prototypical buildings with compact building shape to assess its impact on energy performance.

Keywords : building geometry, energy efficiency, heat gain, heat loss

Conference Title : ICDPUM 2015 : International Conference on Development Planning and Urban Management

Conference Location : London, United Kingdom

Conference Dates : October 23-24, 2015