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BIM-Enabled Energy Analysis for Sustainability: A Case Study of High Rise Building

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Abstract

The current works aim to investigate the energy performance of the building system at the planning stage for sustainable design. Building information modelling has been adopted to simulated a high rise multi-story building in a virtual environment. The Insight has been utilized to access the performance energy in terms of kWh/m2/yr. A case study of sixteen story building has been assessed at its current proposed location, which is at an angle of 370 from the centerline of the building along with the transverse axis and at true north. The study observed that the case resulted in annual consumption of 282 kWh/m2/yr and 276 kWh/m2/yr, respectively. The study has highlighted that adopting virtual technology at design building can help to achieve the optimized sustainable design solutions by accessing energy requirements at the early stage of design inception.

Biography

Irbaz Hasan has completed his bachelors of Civil Engineering at the age of 23 years from Sargodha University and Masters in Construction Engineering and Management is going on from Capital University of Science and Technology nowadays. Dr. Syed Shujaa Safadr Gardezi is my Supervisor and assistant professor at Capital University. He has 13 years of industrial experience and published more than 10 papers in reputed journals.