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A Prediction of Electrical Cost for High-Rise Building Construction

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Abstract : The increase in electricity prices affects the cost of high-rise building construction. The objectives of this research are to study the electrical cost, trend of electrical cost and to forecast electrical cost of high-rise building construction. The methods of this research are: 1) to study electrical payment formats, cost data collection methods, and the factors affecting electrical cost of high-rise building construction, 2) to study the quantity and trend of cumulative percentage of the electrical cost, and 3) to forecast the electrical cost for different types of high-rise buildings. The results of this research show that the average proportion between electrical cost and the value of the construction project is 0.87 percent. The proportion of electrical cost for residential, office and commercial, and hotel buildings are closely proportional. If construction project value increases, the proportion of electrical cost and the value of the construction project will decrease. However, there is a relationship between the amount of electrical cost and the value of the construction project. During the structural construction phase, the amount of electrical cost will increase and during structural and architectural construction phase, electrical cost will be maximum. The cumulative percentage of the electrical cost is related to the cumulative percentage of the high-rise building construction cost in the same direction. The amount of service space of the building, number of floors and the duration of the construction affect the electrical cost of construction. The electrical cost of construction forecasted by using linear regression equation is close to the electrical cost forecasted by using the proportion of electrical cost and value of the project.

Keywords : high-rise building construction, electrical cost, construction phase, architectural phase
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