集合式住宅公共空間節能照明專案採購決策模型之研究

Procurement Decision Model of Energy - Saving Lighting Project in Public Space of Collective

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摘要

本研究旨在建構節能照明專案採購決策模型。首先透過文獻歸納影響節能照明專案之採購因素，再經由專家以修正式德菲法凝聚共識，藉以建立節能照明專案採購決策層級架構，作為節能照明專案採購方案選擇之評估準則。第二步驟則以分析網路程序法 (Analytic Network Process, ANP)，透過專家問卷找出各項準則因素的重要性排序，由節能照明專案採購決策模型之三種解決方案中找出最佳方案。經由研究結果得知，績效保證方案為最佳方案，而品質面則為三個主準則中最重要的因素，另安規認證、知名度、專案成本，則為各個主準則中最重要的影響因素。

關鍵字：LED 照明、多準則決策、節能專案、分析網路程序法

ABSTRACT

This study aims to construct a procurement decision-making model for energy-saving lighting project. First, through the literature to summarize the effect factors that affect the energy-saving lighting project purchasing. Then through the experts to use the modified Delphi method to build consensus, to establish a hierarchy of energy-saving lighting project procurement decision-making, as a choice of energy-saving lighting project procurement plan Evaluation criteria. In the second step, the Analytic Network Process (ANP) is used to find out the order of importance of each criterion factor through the expert questionnaire. The best solution is found from the three solutions of the energy-saving lighting project procurement decision model. According to the results, performance assurance program is the best solution. The quality is the most important factor among the three main criteria, and safety certification, visibility, and project costs are the most important factors in each of the main criteria.

Keywords: LED lighting, Multi-criteria decision analysis, Energy-saving project, Analytic network process