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A DECISION MAKING MODEL FOR SELECTING ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) PROJECT CONTRACTOR

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Abstract

Because of increased environmental consciousness, pollution emissions reduction has been stressed by more and more governments these days, and the environmental management system (EMS) has become one approach for many firms to comply with environmental regulations. However, with rapidly changing technologies along with increasingly complicated environments, how to select a suitable EMS project has become an important issue that has never been discussed comprehensively. First, tolerating vague and ambiguous decision-making environments should be expected by a good decision-making model. Second, the model should synthesize the negative criteria of risks and costs as well as the positive criteria of opportunities and benefits. Based on the above requirements, a multi-criteria decision making model, which does not only compare the price, but also considers social, environmental and technical factors, is proposed. Through the proposed model, practitioners can fully understand the expected performance of each EMS contractor under various aspects, and the most appropriate EMS contractor with the best synthesized performance result can be selected under the complex and dynamic environment. The model shall enable firms to select the most suitable contractor for EMS projects.

Key words: environmental management system (EMS), multi-criteria decision making, performance, power plant

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