



## **Analysis of the financing difficulties of Taiwan's small-and medium-sized Energy Services Company**

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Title:

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Abstract:

International Energy Agency indicates that enhance energy efficiency is the most important and concrete part to meet the Sustainable Development Scenario achieve limiting global temperature rise to 1.5 °C in these decades. Taiwan government follows up the global trend and mentions the importance of high energy efficiency on energy policy. In recent years, Taiwan has actively achieved its goal of reducing electricity demand through energy conservation strategies or the replacement of electrical equipment.

Energy Services Company(ESCO) provides energy-saving consulting, energy system design and improvement projects to improve energy efficiency and ease the urgency of Taiwan's peak electricity use from the energy demand side. ESCO, which emphasizes energy-saving performance, its production value has a stable rise in the existing business model in Taiwan, and it is expected to explore the abundant potential in the future. For ESCO, although the profit is a long-term stable benefit, the cost of initial investment in energy-saving is a big problem for small-and medium-sized company. The performance guarantee contract between the operator and the customer is based on "shared saving contract", the operator needs to implement energy saving projects with their own funds or the bank loan. For small-and medium-sized ESCOs, the scale of the ESCO project must be expanded through financing, but the number of applications is low because of high-interest rate costs and the banks have low willingness to give the loan.

This study will use the factors for loan theory of financing and use Analytic Hierarchy Process as a research method to understand the prioritization of these factors by experts in various fields (ESCO, energy users, banks). The results of the analysis can be used as a reference for small-and medium-sized ESCOs breakthrough financing dilemma.

Keywords:

Energy Services Company (ESCO), energy efficiency, energy demand side, energy policy, Taiwan