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## FACTORS OF ENERGY EFFICIENT OPTIONS IMPLEMENTATION AT INDUSTRIAL ENTERPRISES

Energy efficiency is a strategic priority for Ukraine as a national security concern [1, 2]. With constant rise of energy prices, industrial enterprises with low energy efficiency increase their energy expenditures and decrease their competitiveness. At the same time, Ukrainian companies often are not able to realise the great potential of implementation of the energy efficiency and the energy efficient options in particular [3].

A process of implementation of energy efficiency faces various barriers for all stakeholders: policy bodies, service providers, end-users and financiers [4]. The barriers for end-users (industrial enterprises) will be considered below. These barriers and related implementation factors for energy efficient options implementation could be divided on two groups: company- and (energy efficient) option-oriented.

Company-oriented barriers are economic and financial, information, technical, and institutional [1]. According to [1, 5, 6], for Ukrainian companies the main obstacles are insufficient financial resources and high cost of capital. Their second concern is lack of government policies and incentives to support energy efficiency improvements [1]. Technical barriers like lack of skilled personnel or technology suppliers have high priority too [1, 5].

Option-oriented factors have influence on inner decision-making processes in a company regarding the energy efficient options implementation. They define the attractiveness of an option in terms of financial and ecological feasibility, technical and organizational viability. For Ukrainian companies, financial feasibility of an option (a payback period, investments and operation costs) is the main driver. However, according to [3], for the investment costs from USD 5'000 to USD 100'000 and payback periods from 1 to 5 years the rate of options implementation is almost the same. The most widely implemented are low-cost options (up to USD 5'000) and options with a short payback period (less than 1 year) [3]. These options have their advantages not only in terms of financial benefits, but also technical (they are easy in implementation and often do not require technology changes or maintenance) and organizational ones (they do not need organizational changes or training of personnel). Ecological factors are not so significant for Ukrainian companies at this moment, although some related taxes have significantly risen recently.

**Conclusions:** 1. Factors of energy efficient options implementation are company- and option-oriented. The last are payback period, investments costs, requirement of the technology change, etc. 2. Further investigations may be focused on the significance of mentioned above factors depending on the size of enterprise, their industrial sectors, current financial status, etc. It will allow developing solutions for supporting such companies in energy efficient modernization like adaptive bank loans, state support programmes, business-consulting approaches etc.

### References

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