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## **Economic factors of the use of the wind energy at sea**

### **SUMMARY**

The main objective of the trial is to determine and evaluate the economic factors of the offshore wind energy in Poland. The research problem is the identification and influence of the economic factors on the offshore wind energy.

The main premise of the preparation of this dissertation was the fact that the few national studies conducted do far on this subject were not scientific in nature, and additionally, they were prepared by the institutions and persons related to the sector of renewable energy. Therefore, the prepared dissertation not only allows to systematize the knowledge of the study area, but most of all can be a source of information affecting the validity of investing in the offshore wind energy in Poland, taking the development of the other renewable energy sources into account.

In the first chapter, the analysis of the development of renewable energy in the context of economic sciences including the problem of resources depletion in economic theory and external costs has been conducted. Also, the political and legal basis for the development of renewable energy at the global, European Union and national level has been presented. The second chapter has covered the analysis and evaluation of factors which are the determinants of the investment in the offshore wind energy. On the basis of this analysis, there was created a model of factors of the development of the offshore wind energy which allows for separation of the key factors for this type of energy in Poland. In the third chapter, the analysis of the energy market in Poland has been conducted - the sources of energy on the market (conventional and unconventional), together with their current and projected participation have been shown. There has also been presented the energy production costs due to the source alongside with the forecasts for the future. The results of empirical research presented in the fourth chapter have included the analysis of case studies of the investment in the offshore wind energy in Polish conditions. In addition, a comparative multi-criteria analysis, which complements the economic analysis, has been carried out. The results of the conducted research have been used to create the recommendations on regulating the financial system which supports the development of the offshore wind energy. At the end of the dissertation there have been formulated the conclusion general in nature, which have been the result of the analysis of literature and the conducted research.

Thanks to the conducted research it has been determined how the various factors economic in nature have been affecting the investment in the offshore wind energy, the economic efficiency of the investment in national conditions has been confirmed, and also it has been analyzed whether the current legal and financial system is able to ensure the development of the investment in wind farm at sea in Poland.

**Keywords:** economic factors, offshore wind energy, renewable energy, sustainable development