

MICROINSTALLATION DEVELOPMENT BARRIERS IN THE CONTEXT OF ENERGY POLICY FROM PERSPECTIVE OF INSTALATORY ENTERPRISES

Summary of PhD dissertation

Krzysztof Borkowski

The research presented in this thesis aims to identify the key regulatory barriers that limit the development of microinstallations, stemming from the national energy policy. Furthermore it attempts to indicate the possibilities of overcoming such obstacles. The specific objective of the study is to determine the characteristics of domestic installer companies. Installer companies are entities dealing in the sale and installation of microinstallations - devices generating electricity from renewable energy sources, installed by electricity consumers (including residential and business), in order to cover the entirety or portion of the electricity demand, with a total installed electric power not exceeding 50 kW.

The research has been conducted with the use of mixed methods in the explanatory sequential design. Three successive stages can be distinguished within the study: quantitative, qualitative and mixed. In order to verify the hypotheses and answer the quantitative stage research questions, statistical data on the development of the microinstallation market was used and a survey of installer companies was carried out. The qualitative stage was based on semi-structured interviews carried out with selected installers, which made it possible to correctly interpret the quantitative data. Due to the complexity of the relationship between the introduction and design of the energy policy instruments and the development of the microinstallation market, an economic model has been developed to estimate both the Net Present Value and the payback period of photovoltaic microinstallation investment made by electricity consumers. The model is a tool which aids the verification of the impact of regulation, support mechanisms in particular, on the economic benefits resulting from the installation of microinstallations for their owners, which insufficiency was identified as the most important barrier to market development.

The research made it possible to determine the basic characteristics of installer companies and the gradation of barriers to the development of microinstallations. A detailed analysis of the energy policy in the area of investment and operational support for microinstallations has been carried out. The energy policy instruments were proven to be key factors in determining both the direction as well as the pace of development of the microinstallations market. Specific proposals of modification of the existing support system were derived from the research, which in the author's opinion may reduce or eliminate barriers to the development of microinstallations in Poland.

The dissertation covers the subject of the development of microinstallations in Poland, which according to the author's knowledge remains an uncommon topic in the scientific literature. The dissertation's scope is innovative and research findings will allow to place the microinstallations market, in particular it's economic aspects, in the space of academic discussion.

According to the author's knowledge, this is the first study in the field of energy economics, in which mixed methods were used, which may constitute an additional value of presented dissertation.

