

Streszczenie pracy w języku angielskim

Determinants of managing renewable energy in Polish gminas' development strategies

Promoter: Associate Professor Eng., Ph.D. Paweł Nowodziński

Author: Iwona Kościańska

Renewable energy is the energy collected from repetitive natural processes. Renewable energy sources (RES) are an alternative to traditional primary non-renewable energy carriers (fossil fuels). Domestically, renewable energy sources include energy collected directly from solar power (converted into heat or electric energy), wind power, geothermal resources (energy generated inside the Earth), hydropower, solid biomass fuels, biogas and liquid biofuels. Unlike non-renewable energy sources such as oil, coal, gas or uranium, the supplies of which are steadily decreasing, renewable energy resources are constantly on the same level. The generation of energy from renewable sources depends largely on local and regional conditions and, therefore, each area should be analysed individually to establish its opportunities in this respect.

The environmental policy of the European Union includes quantity targets to be reached by 2020, also known as the climate and energy package or the "3x20%" package. The aims are as follows: decreasing greenhouse gas emissions by 20% in relation to 1990, decreasing energy usage by 20% in relation to the EU forecasts for 2020, increasing renewable energy usage up to 20% of EU's total energy usage, and increasing renewable energy usage in transport up to 10%.

Poland has significant potential for the development of decentralised, local energetics. Self-governments' positive approach to renewable energy sources is evident. Gminas (a gmina is Poland's principal administrative unit) participate more frequently in the conscious shaping of economic development in the local and regional space. Territorial self-governments play an important part in the local development processes. One of the crucial actions possible to execute is striving for replacing non-renewable resources used for electric energy production with renewable sources.

The most important functions of strategic management in territorial self-governments, meaning the process aiming at formulating and implementing a local development strategy using available resources, including real estate, are effective and competent actions whose goal is to meet the intended objectives, including developing investments with the use of renewable energy. Managing renewable energetics in gminas has become an important challenge for self-governments, and also an interesting research subject.

The main motive for undertaking this dissertation subject was to determine the factors which

influence energetics management in gminas. Another factor was the will to determine what impact investing in renewable energy sources has on local development. The presented dissertation attempts to identify and analyse factors and actions related to renewable energy in gminas' development strategies which are most significant in the author's view. Detailed goals include the following: identifying RES's influence on a gmina's development; determining the significance of the relations between a gmina's size and actions connected with investments related to RES implemented in that gmina; determining whether investments related to RES have been treated by the gminas as a part of long-term strategy or as taking advantage of a one-time chance which emerged due to the possibility of using EU funding; identifying obstacles which appear in self-government units after starting investments related to RES; classifying key factors influencing whether self-governments decide to invest in renewable energy sources or not.

In order to meet the goals of this dissertation, four research hypotheses have been formulated. The principal hypothesis is as follows: investing in renewable energy sources is one of the decisive factors in a gmina's development. The following detailed hypotheses have also been formulated:

- 1) gminas whose organisational structure includes cells/units/departments dedicated to RES investments execute more investment projects of this kind;
- 2) economic and social aspects are statistically the most frequent barriers obstructing RES investments;
- 3) the usage of funding available in EU programmes strongly influences RES investments in gminas.

To explore the studied relations and to verify research hypotheses, a structuralized study using a questionnaire survey was conducted, asking questions related to the identified research problems. This part of the study encompassed urban gminas, urban-rural gminas, rural gminas and city counties (cities with powiat rights) in the Silesian Voivodeship. The respondents of the study were employees of municipal and gmina councils (President of the City, mayor, commune head, supervisors of particular departments). The study encompassed 169 gminas in the Silesian Voivodeship.

In order to assess the meaning and influence of renewable energy investments on local development more completely, the method of case study was used for three selected gminas; it involved a precise analysis of gathered data and interviews with gmina council employees responsible for development and renewable energy investments.

The structure of this dissertation includes an introduction, five chapters and a conclusion. It is supplemented with a reference list and a list of tables, figures and images included in the dissertation.

The first chapter presents issues related to managing a gmina's resources. It also describes the concept of the strategy of managing a gmina's resources and the effectiveness of such management.

The second chapter presents strategic management in gminas. Particular attention is paid to the methods and process of strategic planning; also, selected tools of strategic planning used in local self-governments are presented.

The third chapter discusses renewable energetics management with particular emphasis on barriers which render investments in renewable energy difficult or effectively impossible.

The fourth chapter presents the research process, the characteristics of the study sample, description of the empirical study and conclusions drawn from the study, the results of which are directly related to the research hypothesis.

The fifth chapter contains the second part of the empirical study, the case studies of selected issues conducted by interviewing the employees of selected councils who are experts on RES investments in their gminas.

The last part of the dissertation pertaining to the content is the conclusion which summarises the conducted studies, presents the input into the development of the research area, and expresses the author's assessment and observations following the conducted research.

19.09.2019 r. *Skucinski*

