



GLOBAL ENERGY SECURITY LEVEL ASSESSMENT INDEX: INTRODUCTION AND APPLICATION

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ABSTRACT

Energy security is a rapidly developing concept. It has changed from denoting a simple accessibility to conventional primary energy resources to encompassing stability and impact on political, economic, social, environmental and even cultural elements.

Geopolitical approach to energy security concept remains unquestionable. In parallel there is an increasing interest in introducing and improving the ways to measure energy security of particular states – mostly energy consuming states. This intensifies the debate about indexes that measure energy security by using quantitative approach.

This paper introduces a global energy security level assessment index methodology, focusing on its elements, as well as the application of the suggested index in the assessment of national energy security level. The index takes into account various characteristics of the state in question and it allows measuring and comparing energy security of different states. The paper also presents criticism of already existing methodologies and suggests an improved approach.

The suggested global energy security index combines energy and political factors. It introduces eight indicators. Each indicator is composed of two variables. The first variable is each country's share in production or reserve of specific resource (coal, oil, natural gas, uranium) in the global production or reserve. The second one is political stability level of each country that produces or has reserves of resources. The data of the variables are normalised and the values of the variables are calculated weighting them. This leads to a single number denoting global energy security level that can be compared on the annual basis.

Finally, in this study it is suggested how the value of the global energy security index might be included into energy security level assessment of a particular state.

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