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## **COMPARATIVE ANALYSIS OF GLOBAL TRENDS IN ENERGY SUSTAINABILITY**

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### **Abstract**

The importance of energy sustainability has been constantly growing in scientific, political and economic circles. The reason for this lies in numerous energy and environmental issues that the entire world is facing on an everyday basis. There are several theories about the basic elements of energy sustainability. Nevertheless, the dominant current in scientific circles sees energy sustainability as a concept relying on two basic elements: energy efficiency and renewable energy sources. This study represents a summary and an analysis of the present state of energy sustainability in most countries, in relation to the two elements mentioned above. For the purpose of this study, we have created a new indicator that relies on the principles of sustainable energy, and named it the Simple index of energy sustainability (SIES). In our analysis we used data relating to energy efficiency and renewable energy from more than 130 countries. In addition, we have presented and analyzed trends in the development of energy sustainability using as examples the European Union and China. The paper also focuses on the analysis of energy sustainability in Serbia. The results of these analyses are presented both via both graphic and mathematical tools. In this paper, we strived to compare energy sustainability in countries worldwide, with a special focus on the analysis of causes behind the results and forecasts for future trends in this field.

*Key words:* energy efficiency, energy sustainability, renewable energy sources

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