

SUSTAINABLE ENERGY FOR SUPPORTING THE SUSTAINABLE DEVELOPMENT: EMPIRICAL APPROACH FOR ROMANIA

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ABSTRACT: Low-carbon economy transition is a priority objective of the European Union's actual strategy of sustainable development, which aims to detach economical activities from the negative consequences produced on the environment. For a country, the requirements imposed by accomplishing sustainable economic growth in terms of energy safety involve drawing a new architecture of the energy systems. This paper is not about highlighting the characteristics of the Romanian energy sector, but aims to point out its capacity to contribute to reducing the impact on the environment. The study covers the period 1990 – 2012 and follows the EU members, amongst which a special attention is given to Romania. The main findings of the paper highlight the significant factors of energy sustainability and the impact of consuming various energy sources on atmospheric emissions, at European level. In Romania's case, a positive relation is identified between economic growth, consumption of energy from non-renewable sources and gas emissions, whereas increasing energetic efficiency and using energy which comes from renewable sources are reducing air pollution. For increasing the sustainability character of the Romanian economy, this study recommends changes in the energy mix, especially stimulating the investments in renewable energy sources.

Keywords: energy sustainability, energetic efficiency, greenhouse gases, renewable energy sustainable development

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