

Input-Output Analysis of the Structural Transformations in the Lithuanian Energy Sector

Topic: Input-output analysis for policy making 3

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Significant structural transformations in the Lithuanian energy sector are expected since Lithuania has an obligation to achieve a mandatory target of 23% share of renewable energy in the final energy consumption in 2020. Inasmuch as the energy sector is inextricable part of the whole economy, it is obvious that these transformations would make direct and indirect influence on the performance of other branches of the economy. In this context, a detailed analysis of possible energy transformations and their impacts on economy is essential prerequisite for the choice of relevant policy measures.

Analysis presented in this paper has been performed in two stages: modelling of the future development of the Lithuanian energy sector and evaluation of socio-economic and environmental impacts of structural transformations. In order to analyse the future development of the energy sector, a partial equilibrium model has been created. Wide variety of energy transformation technologies and processes has been included into the model. When applying this model the most attractive energy transformation technologies and domestic resources have been identified, and possible changes in energy balance have been evaluated. Modelling results have been used as a basis for the broader impact analysis. In order to create a background for evaluation of socio-economic as well as environmental consequences, Lithuanian input-output table has been modified and extended. These improvements have allowed evaluation of impacts of structural changes in the energy sector on employment, value added, greenhouse gas emissions and other indicators presented in the paper.

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