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MACROECONOMIC IMPACT OF SMR DEVELOPMENT AND COST OF FINANCING

Nuclear energy will play a significant role in the energy transition. Without nuclear energy it is impossible to achieve carbon neutrality by 2050. The development of SMR further strengthens the acceptability of nuclear energy in the world. The macroeconomic impact of the SMR development is very important, especially in the case of countries that are technology importers, such as Croatia. One of the key aspects is to calculate the macroeconomic impact of SMR development. The cost of SMR financing based on interest rate, apart from total investment and the localisation factor, has a significant impact on macroeconomic results. The IAEA developed the EMPOWER model to support macroeconomic impact analysis. The methodological basis of EMPOWER is an extended input-output framework that takes an input-output table as its primary database. The paper analyses the impact of SMR financing cost and interest rate on macroeconomic variables based on EMPOWER model in Croatia. For the purposes of the analysis, a new energy scenario was created that includes SMR as one of the sources of electricity. The MESSAGE model was used for energy planning. First results indicate the significant importance of cost of financing of SMR on macroeconomic variables (GDP) during construction and repayment period.

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