Possible impacts of an increase in bio-methane production on European economies

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The Russian invasion on Ukraine has led to dramatic changes in global energy and food markets. In the case of Europe, the supply of fossil fuels seems to be the main problem that bothers most of the policy makers. Hence, the recently adopted by the European Commision the REPowerEU Plan focuses on the ways to reduce the dependence of Russian gas, oil and coal. One of the proposed measures is a significant increase in bio-methane production from current 3 bcm to 35 bcm by 2030 (and possibly to and 167 bcm in 2050) so that it would cover 20% of projected gas demand. Estimated cost of required investment amounts to euro 37 billion.

This paper applies the MAGNET model (The Modular Applied GeNeral Equilibrium Tool) to analyse different long-term scenarios related to the proposed increase in bio-methane production in Europe. We show both the overall macroeconomic impacts of proposed measure along with the impacts related to broadly defined bio-economy sector. We verify under what circumstances projected investments may allow to reach the production target and whether the above target is actually achievable. We also consider an additional shock to the markets that could be caused by potential Ukraine accession.