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In this article the impact of the future development of the energy system on the feasibility of waste treatment options is analysed. In the article two different optimization tools are used: a regional electricity model (Balmorel) and a national waste treatment and district heating model (OptiWaste). When performing optimization by minimizing the socio-economic costs, into future energy systems with high wind power production, it proves feasible primarily to incinerate waste in large scale combined heat and power (CHP) plants, whereas more incineration takes place in decentralized CHP plants in future scenarios with higher biomass consumption, where the average heat prices are higher. In both scenarios, biogas produced from organic waste is upgraded and fed into the natural gas grid and waste is incinerated rather than being centrally sorted in a material recovery facility.

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