

Socio-economic evaluation of selected biogas technologies

This project presents basic socio-economic analyses conducted as part of a larger interdisciplinary research project (BIOMAN) focussing on the merits of biogas production as a means to improve the Danish agricultural greenhouse gas (GHG) balance. The socio-economic analyses presented include financial as well as welfare economic analyses of biogas production based on five different types of input and of biogas production plants with three different treatment capacities respectively. The analyses are based on scenario descriptions defined jointly by the participants in the BIOMAN project.

All considered scenarios lead to welfare economic losses. Overall welfare economic GHG reduction costs seem to increase with increasing crop/crop material share of input and although the costs vary significantly across scenarios they are quite high for all scenarios. The financial analyses suggest that biogas production generally will be financially profitable for the agricultural sector and local CHP facilities but unprofitable for the biogas plants and the State. Seen from a policy perspective the results highlights the importance of designing regulatory instruments in a way that create incentives for private actors to engage in welfare economically desirable biogas production activities while discouraging the expansion of welfare economically undesirable activities.

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Project report: <http://www2.dmu.dk/Pub/SR62.pdf>