

Danish Biogas Policies and Partnerships among Prominent Actors in the Biogas Sector: Lessons Learnt from Two Newly Developed Biogas Projects

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Summary

Denmark, one of the world's largest exporters of pork and dairy products, has been developing biogas technologies for utilization of animal manure since the 1970s. The biogas sector has been linked closely to stakeholders in the agricultural sector, but since the financial crisis of 2007, the investment capacity of the sector has been restricted, leading to development of new types of biogas projects. This study aimed to investigate these newly developed projects. In particular, we focused on the energy company-driven project in Holsted and the municipality-driven project in Solrød as case studies. Through application of the Institutions of Sustainability (IoS) framework to these case studies, we identified the roles of farmers, municipalities and energy companies during the project development, and evaluated the goodness of the strategic choices of these actors from the viewpoint of minimization of transaction costs. During the ex-ante plant construction phases, information and negotiation costs were relatively high in order to concrete project proposals through, for example, environmental impact assessment and public hearing, whereas these processes are essential for long-term project running, which results in lower monitoring costs. It was suggested that the shared-goals of solving local problems such as water pollution and climate change mitigation, and existence of coordinators who establish links among the different types of stakeholders were essential for successful project development. The managers of biogas plants maintain long-term formal manure-supply contracts with livestock farmers and offer a financial incentive to farmers providing high-quality manure through improved manure treatments. These activities were also found to be critical factors for the success of sustainable biogas development.

Key words: Biogas, Livestock manure and slurry, Renewable energy policies, Transaction costs, Denmark

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