

On the (un)successful Deployment of Renewable Energies: Territorial Context Matters.

A conceptual framework and an empirical analysis of biogas projects

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Abstract:

Given the goal set by the French government to open 1000 biogas plants by 2020, we feel it is important to investigate the factors linked to the success or failure of anaerobic digestion projects, especially as the inherent challenges mean that there are barely 300 in operation today. We thus developed a conceptual framework to help us examine territorial energy transition projects, which we applied to an empirical analysis of the biogas production process. We conducted a quantitative study (logit model with 91 anaerobic digestion projects) and a qualitative study (49 semi-structured interviews and 455 articles from the regional daily press) to identify and understand the processes through which anaerobic digestion projects reach a successful outcome or, conversely, fail. Our findings indicate that projects may be abandoned or interrupted due to the presence of groups of protestors who are often apprehensive of such schemes and do not trust the project leaders. Lack of anticipation and early dialogue tends to exacerbate the ensuing challenges. Furthermore, social acceptance appears to be correlated with proximity to the biogas plants but not to the size of the digester. Finally, operating and/or investment subsidies appear to have a positive and significant effect on a project's success. In this study, we highlight the need to introduce locally defined policies rather than one-size-fits-all policies in order to develop renewable energy projects in specific regions.

Keywords: biogas, anaerobic digestion, territorial context, energy transition

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